WILLIAM KENNY ASSOCIATES LLC

SOIL SCIENCE
ECOLOGICAL SERVICES
LAND USE PLANNING
LANDSCAPE ARCHITECTURE

May 8, 2019

U.S. Army Corps of Engineers
New York District
ATTN: Regulatory Branch, Room 1937
26 Federal Plaza
New York, NY 10278-0090

Re: Request for Jurisdictional Determination
Property Z169
Hawthorne, Mount Pleasant, New York

Dear Sir or Madam:

On behalf of the Applicant, Fareri Associates, LP / North 80 LLC, William Kenny Associates LLC (WKA) is filing the enclosed documentation to confirm boundaries of wetlands and watercourses within an approximately 79-acre project site located in Hawthorne, Mount Pleasant, New York. WKA delineated the boundaries of wetlands and watercourses at the project site in the spring of 2018. During this investigation, four primarily isolated wetland areas ranging in size from approximately 0.03 acres to 2.1 acres were delineated. A description of the physical characteristics of the delineated wetlands areas and their regulatory jurisdiction based upon Army Corps of Engineers (Corps) criteria are present in documents that are attached and noted below:

1. Owner Authorization Letter granting the Corps access to the property.
2. *USGS Site Location Map* prepared by WKA and dated September 5, 2018.
3. *Survey of Property* prepared by Ward Carpenter Engineers Molnar, Inc., dated May 24, 2017 and revised with wetland boundaries by Gateway Development Group on May 11, 2018.
4. New York State Environmental Resource Map.
5. National Wetlands Inventory Map of the property.
6. Wetland and Watercourse Delineation Report prepared by WKA and dated April 30, 2019.
7. USACE Wetland Determination Data Forms and relevant Site Photos (1-16) completed by WKA and dated June 20, 2018.
8. *Federal Wetland & Watercourse Delineation Map* prepared by WKA and dated August 28, 2018
9. The *Ecological Assessment Report* prepared by WKA and dated May 25, 2018.

In summary, two federally jurisdictional wetlands are located at the project site. None of the wetland and watercourse systems are considered traditionally navigable waters (TNWs). However, both

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federally jurisdictional watercourses on site may be classified as non-navigable perennial relatively permanent waters (perennial RPWs). The remaining wetland and watercourse systems are local, non-jurisdictional federal wetlands.

We look forward to meeting you in the field to review the boundaries of the above described systems. If you should have any questions or comments, please do not hesitate to contact me.

Sincerely,

William L. Kenny, PWS, PLA
Principal

Enclosure

Ref. No. 3836

Gateway Development Group
2 Dearfield Drive
Suite 3
Greenwich, CT 06831

April 30, 2019

U.S. Army Corps of Engineers
New York District
ATTN: Regulatory Branch, Room 1937
26 Federal Plaza
New York, NY 10278-0090

Re: Request for Jurisdictional Determination
Property Z169
Hawthorne, Mount Pleasant, New York

Dear Sir or Madam:

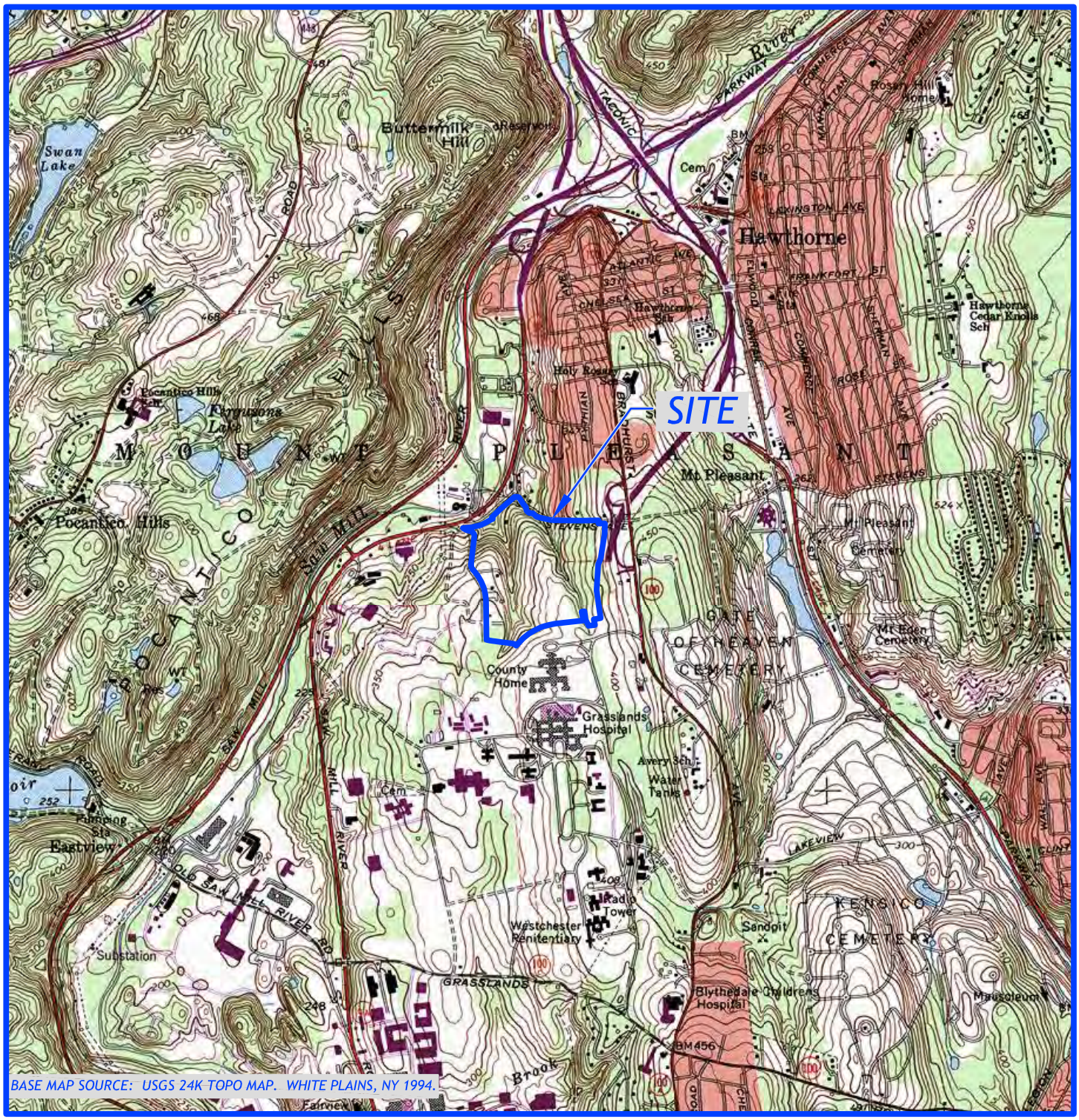
I hereby authorize the United States Army Corps of Engineers to access Property Z169 to review the parcel for the purpose of providing a jurisdictional determination for onsite wetlands and watercourses.

Sincerely,

05.07.2019

Property Owner/Applicant Date:

KEVIN E. MOLNAR
AS AGENT FOR GATEWAY DEVELOPMENT GROUP



BASE MAP SOURCE: USGS 24K TOPO MAP. WHITE PLAINS, NY 1994.

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USGS PROJECT LOCATION MAP

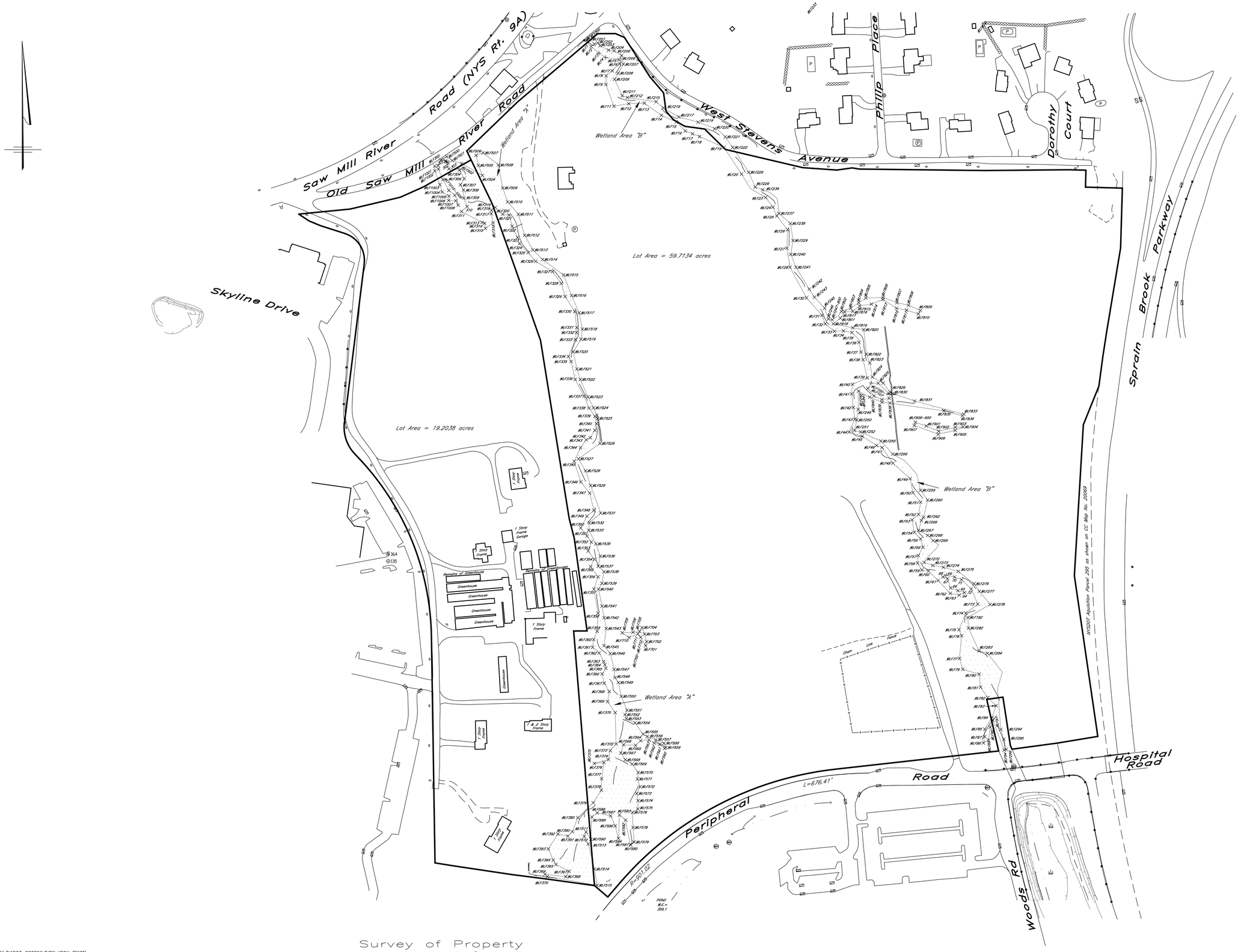
PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: SEPTEMBER 5, 2018

SCALE: 0' 1000' 2000'

NORTH

REF. NO. 3836



Survey of Property
prepared for
John Fareri
in the Town of
Mount Pleasant
Westchester County, N.Y.
Scale 1"=100' May 24, 2017

Additional information added June 6, 2017, June 23, 2017, July 5, 2017, April 26, 2018 & May 11, 2018.

Spatial Reference System: USA/NAD83-CORS96/NEW YORK (EAST)
Vertical Datum: NAVD88

Subsurface structures and their encroachments, if any exist, are not shown hereon.

"Unauthorized alterations or additions to a survey map is a violation of section 7209, sub-division 2, of the New York State Education Law."

"Only copies of the original survey marked with the land surveyor's inked or embossed seal shall be considered a true and valid copy. "

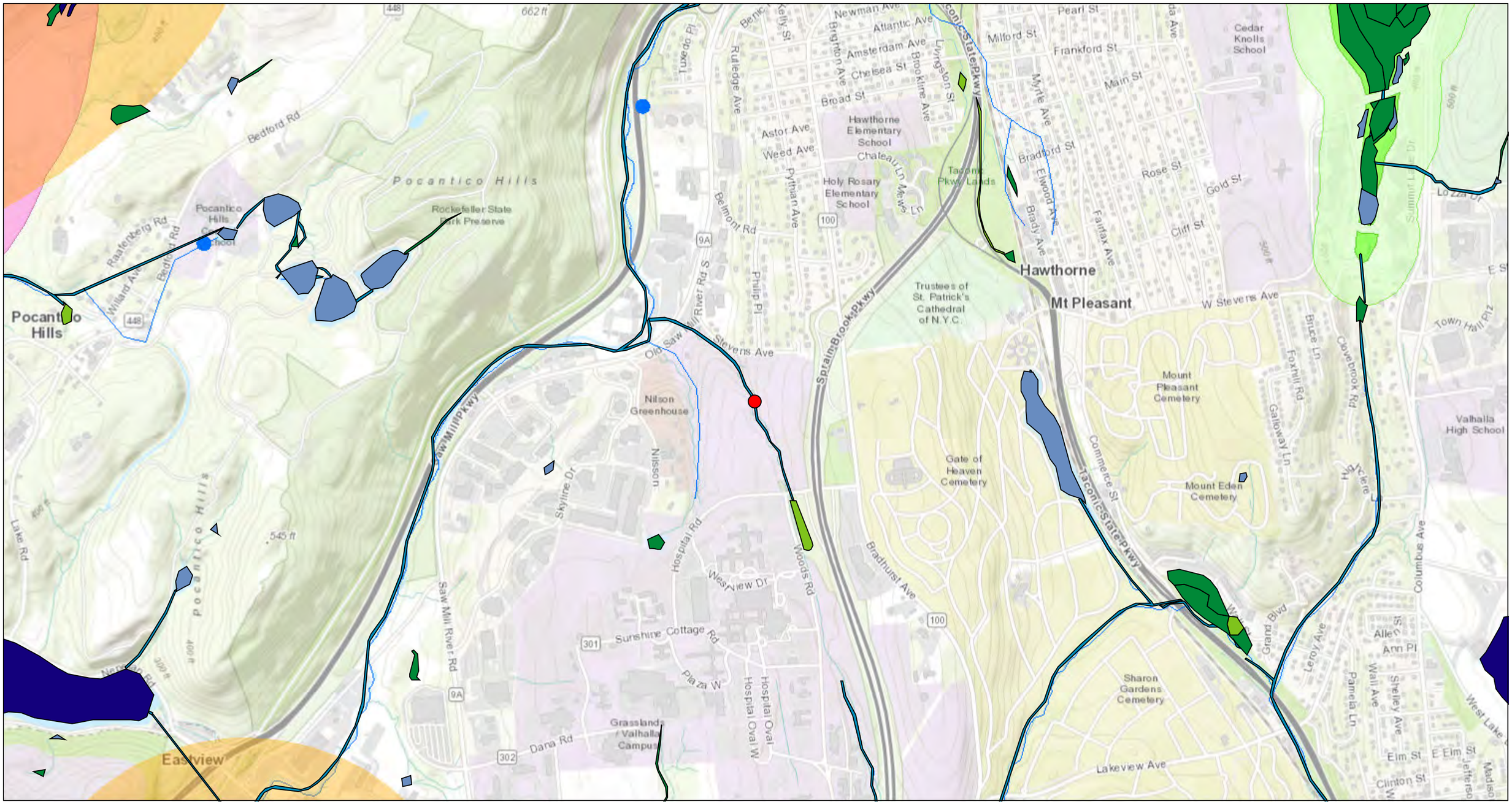
"Certifications indicated hereon signify that this survey was prepared in accordance with the existing code of practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors. Said certifications shall run to the person for whom the survey is prepared only, and on his behalf to the Title Company, governmental agency and lending institution listed hereon, and to the assignees of the lending institution. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS. "

Ward Carpenter Engineers Inc.
76 Mamaroneck Avenue
White Plains, N.Y. 10601

Job # 50139-52891-52890-53399

LDD 50139\dwg\50139.dwg

Environmental Resource Mapper



April 18, 2018

1:18,056

0 0.225 0.45 0.9 mi

0 0.35 0.7 1.4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

NYS Department of Environmental Conservation
Not a legal document

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands

June 26, 2018

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

WILLIAM KENNY ASSOCIATES LLC

SOIL SCIENCE
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April 30, 2019

Mr. Kevin E. Molnar, AIA
Director of Design
Gateway Development Group
382 Greenwich Avenue
Greenwich, CT 06830

Re: Wetland and Watercourse Delineation
Property Z169, Town of Mount Pleasant, New York

Dear Mr. Molnar:

As requested, we investigated the property (Property Z169) located in the central portion of Westchester County in the Town of Mount Pleasant, New York to determine the presence or absence of wetlands and/or waterbodies, to demarcate (flag) the boundaries of wetlands and waterbodies identified, and to identify onsite soil types. This letter includes the methods and results of our investigation, which we completed in February and March 2018. In summary, four wetland and watercourse systems, which fall under one or more regulatory agency jurisdictions (federal, state, local), were identified and delineated. The first system, which is located in the western portion of the property, is a perennial watercourse with several intermittent watercourses and areas of bordering wetland. The second system is the same as the first but located in the eastern portion of the property. The third system is located immediately east of the first system and is an isolated intermittent watercourse. The last system is an isolated intermittent watercourse located immediately east of the second system.

Regulatory Definitions

The federal government regulates certain activities in the Waters of the United States. Waters of the United States are navigable waters, their tributaries, and adjacent wetlands and other waters or wetlands where their degradation or destruction could affect interstate or foreign commerce. Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adopted for life in saturated soil conditions. As specified in the U.S. Corps of Engineers 1987 publication *Corps of Engineers Wetlands Delineation Manual* an area is a wetland if a minimum of one positive field indicator of wetland (hydrophytic) vegetation, wetland (hydric) soils and wetland hydrology are identified. The Corps uses the

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presence or absence of an ordinary high water mark or bed and bank to determine surface waters (e.g., ponds and streams), including intermittent waterbodies. Wetland vegetation need not be present to complete a waterbody determination.

The New York Department of Environmental Conservation (NYDEC) protects freshwater wetlands and regulates certain activities occurring within adjacent areas (land within 100 feet horizontally of DEC wetlands) under State of New York Article 24 on the Environmental Conservation Law. The Act defines wetlands "as lands and submerged lands commonly known as swamps, sloughs, bogs and flats which support wetland vegetation." Based on the New York State Wetlands Delineation manual, the primary criteria for wetland delineation is determined by the presence of hydrophytic vegetation. However, field verification of wetlands may be supported by the presence of hydric soils and wetland hydrology, as per the Corps 1987 manual. Under Title 3 of the Act, freshwater wetlands with an area of 12.4 acres or more are regulated by the DEC. Wetlands less than 12.4 acres may also be regulated, if they are determined to be of unusual importance.

The Town of Mount Pleasant, New York regulates certain activities in and adjacent to wetlands, waterbodies and natural drainage systems under the *Town of Mount Pleasant, NY Town Code Chapter 111*. In the law, wetlands are defined as:

> A. All lands and submerged lands known as "bogs," "marshes," "swamps," "fresh meadows" and "estuarine areas" having types of soils such as alluvial land, Carlisle muck, Limerick and Sloan, including adjacent and peripheral land with vegetation evidencing the same habitat, whether inundated at any given time or not, and shall more specifically mean and include:
>
> (1) FLOODPLAIN
> Soils covered with water during variable seasonal periods.
> (2) FRESH MEADOWS
> Waterlogged soil containing such vegetation as sedges, rushes, grasses and various broad-leaved plants.
> (3) SHALLOW FRESH MARSHES
> Areas bordering on lakes, ponds, deep marshes and wet areas of a depth to six inches, with vegetation such as cattails or hybrids thereof, bulrushes or hybrids thereof and arrowheads or other species of Sagittarius.
> (4) DEEP FRESH MARSHES
> Areas covered with water of depths from six inches to three feet, with such vegetation as cattails or hybrids thereof, reeds or other species of Sparganium, wild rice and bulrushes.
> (5) SHRUB SWAMPS
> Waterlogged soil with vegetation such as alders, buttonbush and dogwoods and up to six inches of water.
> (6) WOODED SWAMPS
> Waterlogged soil with vegetation such as red maple, elm or cedar and up to one foot of water.
> (7) BOGS

Usually waterlogged, acid soil with both woody and herbaceous plants in the heath family, as well as sedges and sphagnum mosses.

B. Notwithstanding the definitions of "wetlands" based on vegetation [Subsection A(l) through (7) above], "wetlands," in general, shall be defined by types of soil, as exemplified by the Wetlands District Control Map.

C. "Wetlands" shall further include but not be limited to all those lands designated as "wetlands" by the New York State Department of Environmental Conservation under the authority granted by the Freshwater Wetlands Act.

Watercourses are defined as: Any water body, natural or artificial, such as but not limited to a pond, reservoir, lake, stream or brook.

The drinking water supply for the City of New York and other nearby municipalities comes from upstate watersheds located in Westchester, Putnam, and seven additional counties. These watershed areas are regulated under Chapter 18, titled *Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources* (Rules and Regulations) of the New York City Code.

According to the Rules and Regulations, certain (Regulated) activities are prohibited and others are permitted only after review and approval by the DEP. Generally, the proximity of proposed Regulated Activities to reservoirs, reservoir stems, controlled lakes, watercourses (intermittent and perennial streams) or wetlands is the primary determining factor regarding their fate. The typical limiting distances for development activities on the subject parcels relative to these regulations are:

Intermittent Stream	50 to 100 feet
Perennial Stream	100 feet
Wetland	50 to 100 feet

These watershed and water supply features are defined in the Rules and Regulations as follows:

"Watercourse: a visible path through which surface water travels on a regular basis, including an intermittent stream, which is tributary to the water supply. A drainage ditch, swale or surface feature that contains water only during and immediately after a rainstorm or a snowmelt shall not be considered to be a watercourse*."*

"Intermittent Stream: a watercourse that during certain times of the year goes dry or whose lowest annual mean discharge during seven consecutive days with a recurrence interval of ten years (MA7CD/10) is less than 0.1 cubic foot per second and which periodically receives groundwater inflow. A drainage ditch, swale or surface feature that contains water only during and immediately after a rainstorm or a snow melt shall not be considered to be an intermittent stream."

"Perennial Stream: a watercourse that flows throughout the year from source to mouth."

> *"Wetland: any area mapped as a wetland by the New York State Department of Environmental Conservation pursuant to the Environmental Conservation Law, which is at least 12.4 acres in size or has been designated as a wetland of unusual local importance."*

Methodology

Wetland identification was based on the presence of hydric soils and/or a prevalence of hydrophytic vegetation. Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.). To observe the morphology of the property's soils, test pits and/or borings (maximum depth of two feet) were completed at the site. Prevalence of hydrophytic vegetation was confirmed by visually determining the dominant plant species in each vegetation community in accordance with the Onsite Routine Determination Method as described in the 1987 manual titled Corps *of Engineers Wetland Delineation Manual*.

The soil investigation included the completion of a Second Order soil survey in accordance with the principles and practices noted in the USDA publication *Soil Survey Manual* (1993). The classification system of the National Cooperative Soil Survey was used in this investigation. Soil map units identified at the project site generally correspond to those included in the *Soil Survey of Putnam and Westchester Counties, New York* (USDA 1994).

Waterbody determinations were based on the presence or absence of an ordinary high water mark or bed and bank.

Wetland and watercourse boundaries were demarcated (flagged) with pink surveyor's tape (hung from vegetation) or small pink flags (on wire stakes) labeled "William Kenny Associates" that are generally spaced a maximum of every 50 feet. Complete boundaries are located along the lines that connect these sequentially numbered flags. <u>The wetland and watercourse boundaries are subject to change until adopted by local, state, or federal regulatory agencies.</u>

Results

The approximate 79.0-acre commercial property (Property Z169) is located in Mount Pleasant, New York. Hospital Road borders the southern property boundary, West Stevens Avenue borders the northern property boundary, Old Saw Mill Road South borders the northwestern property boundary, Nilsson Drive borders the western property boundary and Sprain Brook Parkway borders the eastern property boundary. Property improvements include several dwellings, a small nursery and asphalt and gravel drives and parking areas. Improvements are concentrated in the western and southern portions of the property. A variety of vegetative covers are present at the property, including lawn with ornamentals and shade trees, broadleaved deciduous forest, broadleaved deciduous forest and shrubland. Areas of meadow and lawn with shade trees are also present at the property. On the days of the review, the sky was clear and air temperatures were in the 40's ^{o} F.

Four inland wetland and watercourse systems were identified and delineated within the investigation area. The first system, which is located in the western portion of the property, is a perennial

watercourse with several intermittent watercourses and areas of bordering wetland. The second system is the same as the first but located in the eastern portion of the property. The third system is located immediately east of the first system and is an isolated intermittent watercourse. The last system is an isolated intermittent watercourse located immediately east of the second system. Wetland soils are primarily poorly drained fine sandy loams that formed from glacial till deposits. The approximate locations of the systems are shown on the attached map. The boundaries of the wetlands were marked at the site with flags numbered 1 to 94, 100 to 107, 200 to 296, 300 to 370, 800 to 841, 500 to 515, 1000 to 1015, 900 to 908 and 700 to 712. The wetland and watercourse systems fall under federal, state, NYCDEP and town jurisdiction.

Five soil map units were identified on the property (one wetland and four upland). Each map unit represents a specific area on the landscape and consists of one or more soils for which the unit is named. Other soils (inclusions that are generally too small to be delineated separately) may account for 10 to 15 percent of each map unit. The mapped units are identified in the following table by name and symbol and typical characteristics (parent material, drainage class, high water table, depth to bedrock, and slope). These characteristics are generally the primary characteristics to be considered in land use planning and management. A description of each characteristic and their land use implications follows the table. A complete description of each soil map unit can be found in the *Soil Survey of Putnam and Westchester Counties, New York* (USDA 1994), and at *http://soils.usda.gov/technical/classification/osd/index.html*. On the days of the review, there was 0.0 to 1.0 inches of soil frost and no snow cover. The upland soil was dry to moist and the wetland soil was wet to inundated.

Map Unit		Parent Material	Slope (%)	Drainage Class	High Water Table			Depth To Bedrock (in)
Sym.	Name				Depth (ft)	Kind	Mos.	
	Upland Soil							
Pn	Paxton fine sandy loam	Compact Glacial Till	2-25	Well Drained	1.5-2.5	Perched	Feb.-Apr.	>60
Ub	Udorthents, smoothed	Excavated or Filled Soil (>2 feet)	0-45	Well Drained to Somewhat Poorly Drained	1.5->6.0	Apparent	Nov-May	>60
Uf	Urban Land Complex	Pavement & structures account for 85% or more of the area. Additional investigations required to determine characteristics						
Wd	Woodbridge loam	Compact Glacial Till	0-15	Moderately Well Drained	1.5-2.5	Perched	Nov-May	>60
	Hydric Soil							
Rd	Ridgebury loam	Compact Glacial Till	0-8	Poorly Drained, Somewhat Poorly Drained	0.0-1.5	Perched	Nov-May	>60

Parent material is the unconsolidated organic and mineral material in which soil forms. Soil inherits characteristics, such as mineralogy and texture, from its parent material. Glacial till is unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and

deposited by glacial ice. Glacial outwash consists of gravel, sand, and silt, which is commonly stratified, deposited by glacial melt water. Alluvium is material such as sand, silt, or clay, deposited on land by streams. Organic deposits consist of decomposed plant and animal parts.

A soil's texture affects the ease of digging, filling, and compacting and the permeability of a soil. Generally sand and gravel soils, such as outwash soils, have higher permeability rates than most glacial till soils. Soil permeability affects the cost to design and construct subsurface sanitary disposal facilities and, if too slow or too fast, may preclude their use. Outwash soils are generally excellent sources of natural aggregates (sand and gravel) suitable for commercial use, such as construction sub base material. Organic layers in soils can cause movement of structural footings. Compacted glacial till layers make excavating more difficult and may preclude the use of subsurface sanitary disposal systems or increase their design and construction costs if fill material is required.

Generally, soils with steeper slopes increase construction costs, increase the potential for erosion and sedimentation impacts, and reduce the feasibility of locating subsurface sanitary disposal facilities.

Drainage class refers to the frequency and duration of periods of soil saturation or partial saturation during soil formation. Seven classes of natural drainage classes exist. They range from excessively drained, where water is removed from the soil very rapidly, to very poorly drained, where water is removed so slowly that free water remains at or near the soil surface during most of the growing season. Soil drainage affects the type and growth of plants found in an area. When landscaping or gardening, drainage class information can be used to assure that proposed plants are adapted to existing drainage conditions or that necessary alterations to drainage conditions (irrigation or drainage systems) are provided to assure plant survival.

High water table is the highest level of a saturated zone in the soil in most years. The water table can affect the timing of excavations; the ease of excavating, constructing, and grading; and the supporting capacity of the soil. Shallow water tables may preclude the use of subsurface sanitary disposal systems or increase design and construction costs if fill material is required.

The depth to bedrock refers to the depth to fixed rock. Bedrock depth affects the ease and cost of construction, such as digging, filling, compacting, and planting. Shallow depth bedrock may preclude the use of subsurface sanitary disposal systems or increase design and construction costs if fill material is required.

Conclusions

Today, we investigated a portion of the property at Property Z169 in Mount Pleasant, New York and identified and delineated two wetland and watercourse systems, which fall under one or more regulatory agency jurisdictions. Thank you for the opportunity to assist you with this project. If you should have any questions or comments, please do not hesitate to contact me.

Sincerely,

William L. Kenny, PWS, PLA
Soil Scientist

Enclosure

Ref. No. 3836

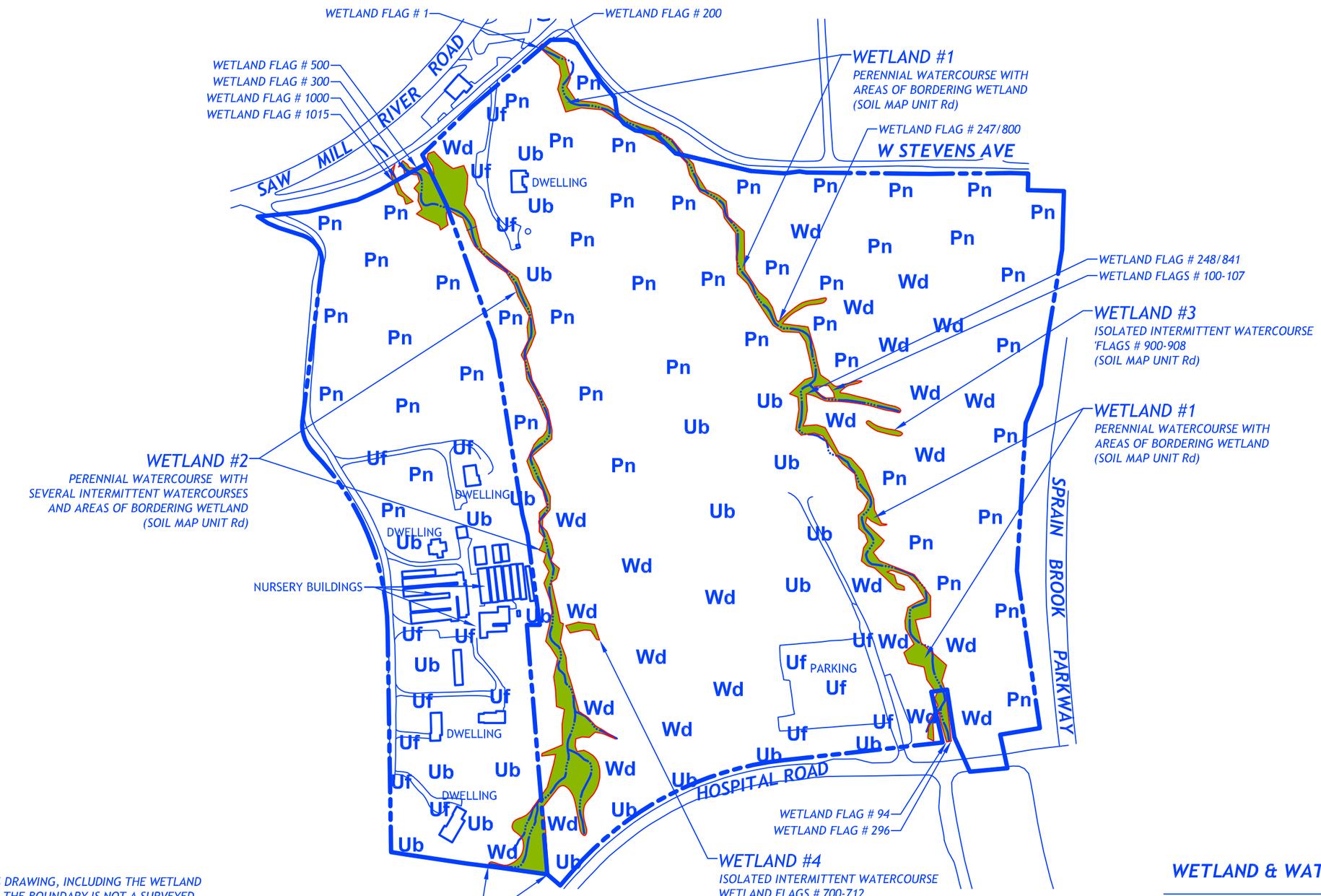
SOIL LEGEND:

UPLAND:

Pn	PAXTON FINE SANDY LOAM
Ub	UDORTHENTS, SMOOTHED
Uf	URBAN LAND COMPLEX
Wd	WOODBRIDGE LOAM

WETLAND:

Rd	RIDGEBURY LOAM



NOTES:

- *INFORMATION SHOWN ON THIS DRAWING, INCLUDING THE WETLAND BOUNDARY, IS APPROXIMATE. THE BOUNDARY IS NOT A SURVEYED REPRESENTATION OF WHAT WAS FIELD MARKED (FLAGGED).*
- *WETLAND AND SOIL INFORMATION PROVIDED BY WILLIAM KENNY ASSOC. OTHER INFORMATION TAKEN FROM A DRAWING PREPARED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.*
- ***Pn, Ub, Uf, Wd** AND **Rd** ARE SOIL MAPPING UNIT SYMBOLS. SEE WETLAND DELINEATION REPORT FOR THE SOIL MAP UNIT NAMES AND ADDITIONAL RELATED INFORMATION.*

I CERTIFY THAT THIS WETLAND MAP SUBSTANTIALLY REPRESENTS THE SOILS AND WETLANDS MAPPED IN THE FIELD

WILLIAM L. KENNY, SOIL SCIENTIST

WILLIAM KENNY ASSOCIATES LLC

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WETLAND & WATERCOURSE MAP

PROPERTY Z169
MOUNT PLEASANT, NEW YORK

SCALE: NOT TO SCALE
DATE: APRIL 30, 2019

Ref. No. 3836

NORTH

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W1

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave

Slope (%): ~2 Lat: 41.095346 Long: -73.808484 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Though there is generally an absence of hydrophytic vegetation the hydrology and soils are indicative of a wetland and watercourse system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 0
Water Table Present?	Yes X	No _____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The system is located at the base of a gully and has a defined channel. Its principle water source is surface and shallow subsurface flow.

VEGETATION – Use scientific names of plants. Sampling Point: W1

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	20	Yes	FAC
2. Fraxinus americana	15		FACU
3. Acer saccharum	5		FACU
4. Acer platanoides	5		UPL
5. Robinia pseudoacacia	50	Yes	FACU
6.			
7.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Hamamelis virginiana	5		FACU
2. Euonymus alatus	5		NI
3. Lindera benzoin	10	Yes	FACW
4. Rubus pheonicolasius	15	Yes	FACU
5.			
6.			
7.			
	35	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Alliaria petiolata	7	Yes	FACU
2. Polystichum acrostichoides	5	Yes	FACU
3. Impatiens capensis	10	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Hedera helix	20	Yes	FACU
2. Toxicodendron radicans	5		FAC
3. Celastrus orbiculatus	10	Yes	UPL
4. Ampelopsis brevipedunculata	5		N/A
	40	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 18% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Despite the absence of wetland vegetation the system is capable of supporting hydrophytic vegetation.

SOIL

Sampling Point: W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5Y 3/2							
9-12	5Y 6/2							
12-16	5Y 6/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 16

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U1

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Linear slope

Slope (%): ~ 10-15 Lat: 41.095302 Long: -73.808538 Datum: NAVD88

Soil Map Unit Name: Woodbridge NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sampling point is within a moderately sloped area that is adjacent to and elevated from the nearby wetland and watercourse.

VEGETATION – Use scientific names of plants. Sampling Point: U1

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rebrum	30	Yes	FAC
2. Robinia pseudoacacia	35	Yes	FACU
3. Carya ovata	5		FACU
4. Acer saccharum	15		FACU
5.			
6.			
7.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lindera benzoin	10	Yes	FACW
2. Euonymus alatus	5		FACU
3. Acer platanoides	5		FACU
4. Rosa multiflora	30	Yes	FACU
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Allaria petiolata	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	15	Yes	FAC
2. Celastrus orbiculatus	20	Yes	UPL
3. Parthenocissus quinquefolia	5		FACU
4. Hedera helix	5		FACU
	45	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

The sampling area has very little herbaceous vegetation; plants are primarily shrubs and understory and canopy trees.

SOIL Sampling Point: U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 6/6							
8-20	2.5Y 6/6							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W2

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 41.093279 Long: -73.806073 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Though there is generally an absence of hydrophytic vegetation the hydrology and soils are indicative of a wetland and watercourse system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 18"
Water Table Present?	Yes X	No _____	Depth (inches): 13
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Low surface water flow in the sampling area at the time of the investigation.

VEGETATION – Use scientific names of plants. Sampling Point: W2

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus serotina	15		FACU
2. Ulmus americana	30	Yes	FACU
3. Fagus grandifolia	30	Yes	FACU
4. Acer saccharum	20	Yes	FACU
5.			
6.			
7.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Hammelis virginiana	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Equisetum spp.	20	Yes	NI
2. Alliaria petiolata	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Despite the absence of wetland vegetation the system is capable of supporting hydrophytic vegetation.

SOIL

Sampling Point: W2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5Y 3/1							
2-8	5Y 4/3							
8-18	5Y 6/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- X Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Bedrock

Depth (inches): 18"

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U2

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave

Slope (%): ~ 15-20 Lat: 41.093266 Long: -73.806271 Datum: NAVD88

Soil Map Unit Name: Paxton NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: U2

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fagus grandifolia	35	Yes	FACU
2. Ulmus americana	35	Yes	FACW
3. Acer saccharum	20	Yes	FACU
4. Prunus serotina	10		FACU
5.			
6.			
7.			
	100	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Fagus grandifolia	40	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Canopy and understory trees predominate the sampling area.

SOIL

Sampling Point: U2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 5/4							
6-15	2.5Y 6/6							
15-22	2.5Y 6/8							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W3

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Plateau Local relief (concave, convex, none): Linear slope

Slope (%): 2-5 Lat: 41.092918 Long: -73.805418 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: PFO1J

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is located within an intermittent watercourse. Though there is generally an absence of hydrophytic vegetation, the hydrology and soil is indicative of a wetland and watercourse system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): 19

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: W3

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fagus grandifolia	25	Yes	FACU
2. Prunus serotina	20	Yes	FACU
3. Acer platanoides	30	Yes	UPL
4. Carya ovata	10		FACU
5. Ailanthus altissima	5		UPL
6.			
7.			
	90	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Fagus grandifolia	5		FACU
2. Fraxinus americana	5		FACU
3. Rosa multiflora	15	Yes	FACU
4. Lindera benzoin	20	Yes	FACW
5. Lingstrum vulgare	10		FACU
6.			
7.			
	55	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Impatiens capensis	35	Yes	FACW
2. Alliaria petiolata	5		FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Celastrus obiculatum	5	Yes	UPL
2. Parthenocissus quinquefolia	10	Yes	FACU
3. Toxicodendron radicans	10	Yes	FAC
4.			
	25	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 44% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Due to the small size of the system, FACU and UPL vegetation adjacent to the system are included in the survey but not it is not representative of the vegetation primarily in the system, the majority of which is hydrophytic.

SOIL

Sampling Point: W3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 3/2							
4-10	2.5Y 6/6							
10-16	2.5Y 6/4							
16-20	2.5Y 6/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- X Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U3

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Linear slope

Slope (%): ~ 15-20 Lat: 41.093229 Long: -73.805470 Datum: NAVD88

Soil Map Unit Name: Paxton NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No X Hydric Soil Present? Yes _____ No X Wetland Hydrology Present? Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: U3

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fagus grandifolia	35	Yes	FACU
2. Acer platanoides	25	Yes	UPL
3. Ulmus americana	10		FACW
4. Prunus serotina	30	Yes	FACU
5.			
6.			
7.			
	100	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lindera benzoin	10		FACW
2. Rosa multiflora	15	Yes	FACU
3. Sassafras albidum	35	Yes	FACU
4.			
5.			
6.			
7.			
	60	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Carex pensylvanica	5	Yes	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	30	Yes	FACU
2. Celastrus obiculatum	10	Yes	UPL
3.			
4.			
	40	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: U3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 6/4							
10-20	2.5Y 6/6							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W4

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 41.091066 Long: -73.805016 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: PFO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is adjacent to the eastern rocky headwater stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 20"
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 15

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: W4

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	35	Yes	FACU
2. Ulmus americana	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lindera benzoin	25	Yes	FACW
2. Rosa multiflora	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Impatiens capensis	15	Yes	FACW
2. Alliaria petiolata	10		FACU
3. Allium canadense	10		FACU
4. Symplocarpus foetidus	25	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	20	Yes	FAC
2. Ampelopsis brevipedunculata	35	Yes	NI
3. Celastrus orbiculatus	10		UPL
4.			
	65	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2							
6-20	2.5Y 3/2		2.5Y 4/1	40				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U4

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope (small) Local relief (concave, convex, none): Linear slope

Slope (%): ~ 15-20 Lat: 41.091082 Long: -73.805316 Datum: NAVD88

Soil Map Unit Name: Woodbridge NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is on a small, gently sloping, landform facing the adjacent stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: U4

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	25	Yes	FACU
2. Ulmus americana	5		FACW
3. Pinus strobus	45	Yes	FACU
4.			
5.			
6.			
7.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Rosa multiflora	25	Yes	FACU
2. Acer rubrum	10		FAC
3. Lindera benzoin	25	Yes	FACW
4. Euonymus alatus	15		NI
5. Sassafras albidum	5		FACU
6.			
7.			
	80	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Onoclea sensibilis	5		FACW
2. Allaria petiolata	50	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Celastrus orbiculatus	10		UPL
2. Ampelopsis brevipedunculata	5		NI
3. Toxicodendron radicans	15	Yes	FAC
4. Parthenocissus quinquefolia	25	Yes	FACU
	55	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling point is within a forested area that is heavily vegetated.

SOIL

Sampling Point: U4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5Y 7/6							
0-20	2.5Y 5/6							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W5

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave

Slope (%): ~2 Lat: 41.089935 Long: -73.808755 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: PFO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes X	No _____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sampling point is in a shallow ditch within the wetland area.

VEGETATION – Use scientific names of plants. Sampling Point: W5

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carpinus caroliniana	40	Yes	FAC
2. Fagus grandifolia	15		FACU
3. Ulmus americana	35	Yes	FACW
4. Quercus rubra	10		FACU
5.			
6.			
7.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Rosa multiflora	45	Yes	FACU
2. Lindera benzoin	10		FACW
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Osmunda regalis	25	Yes	OBL
2. Athyrium filix-femina	5		NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	5		UPL
2. Ampelopsis brevipedunculata	30	Yes	NI
3. Toxicodendron radicans	5		
4.			
	35	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 6/3							
8-18	10YR 7/1	75	10YR 6/8	25				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- X Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U5

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear slope

Slope (%): ~3 Lat: 41.090015 Long: -73.808423 Datum: NAVD88

Soil Map Unit Name: Woodbridge NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is on a relatively flat, forested area between two portions of a wetland and watercourse system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: U5

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carpinus caroliniana	50	Yes	FAC
2. Acer saccharum	35	Yes	FACU
3. Ulmus americana	15		FACW
4.			
5.			
6.			
7.			
	100	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Liriodendron tulipfera	20	Yes	FACU
2. Carpinus caroliniana	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Carex pensylvanica	5	Yes	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	15	Yes	FACU
2. Ampelopsis brevipedunculata	10	Yes	NI
3.			
4.			
	25	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 30% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is predominately canopy and understory; the herb and shrub layer is sparse.

SOIL

Sampling Point: U5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 6/4							
8-20	10YR 7/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W6

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Gully Local relief (concave, convex, none): Concave

Slope (%): 0-1 Lat: 41.091063 Long: -73.808262 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation Yes, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is located within a low-velocity area of a rocky headwater stream with a vegetation density greater than other portions of the system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 0

Water Table Present? Yes X No ____ Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 0

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W6

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	70	Yes	FACU
2. Acer rubrum	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	90	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Rosa multiflora	20	Yes	FACU
2. Lindera benzoin	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Symplocarpus foetidus	45	Yes	OBL
2. Impatiens capensis	20	Yes	FACW
3. Onclea sensibilis	10		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	35	Yes	FACU
2. Ampelopsis brevipedunculata	5		NI
3.			
4.			
	40	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- X Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 4/1							Oxidized Rhizospheres
8-20	2.5Y 6/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- X Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): 0

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U6

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear slope

Slope (%): ~ 6 Lat: 41.091195 Long: -73.808551 Datum: NAVD88

Soil Map Unit Name: Paxton NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is on a hillside, sloping gently towards the wetland and watercourse system.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slope aspect is towards the wetland and watercourse system.

VEGETATION – Use scientific names of plants. Sampling Point: U6

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	80	Yes	FACU
2. Acer rubrum	10		FAC
3.			
4.			
5.			
6.			
7.			
	90 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lindera benzoin	5		FACW
2. Rosa multiflora	10	Yes	FACU
3. Acer rubrum	15	Yes	FAC
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. N/A			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	5	Yes	FAC
2. Parthenocissus quinquefolia	5	Yes	FACU
3.			
4.			
	10 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: U6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 5/4							
6-18	2.5Y 6/4							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 18

Hydric Soil Present? Yes ____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W7

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave

Slope (%): ~2 Lat: 41.092741 Long: -73.807221 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: PFO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is within a small, isolated system near the larger rocky headwater stream in the western portion of the site.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary source of hydrology appears to be groundwater discharge along the hillslope.

VEGETATION – Use scientific names of plants.

Sampling Point: W7

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	20	Yes	FACW
2. Acer saccharum	30	Yes	FACU
3. Sassafras albidum	15		FACU
4. Acer rubrum	25	Yes	FAC
5.			
6.			
7.			
	90	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Rosa multiflora	30	Yes	FACU
2. Lindera benzoin	15	Yes	FACW
3. Sassafras albidum	10		FACU
4. Carya ovata	5		FACU
5. Robinia pseudoacacia	10		FACU
6.			
7.			
	70	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Impatiens capensis	55	Yes	FACW
2. Carex blanda	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	30	Yes	FACU
2. Ampelopsis brevipedunculata	5		NI
3.			
4.			
	35	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

__ Rapid Test for Hydrophytic Vegetation

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No __

Remarks: (Include photo numbers here or on a separate sheet.)

Due to the size of the wetland, plants predominately consists of herbaceous vegetation and shrubs.

SOIL

Sampling Point: W7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5Y 3/1		10YR 5/6	10				
6-16	2.5Y 6/1		10YR 6/8	35				
16-20	2.5Y 7/1		10YR 6/8	10				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- X Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U7

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear slope

Slope (%): ~ 8 Lat: 41.092776 Long: -73.806899 Datum: NAVD88

Soil Map Unit Name: Paxton NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Much of the vegetation has been cleared in the area east of the sampling point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: U7

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sassafras albidum	30	Yes	FACU
2. Acer platanoides	20	Yes	UPL
3. Acer saccharum	25	Yes	FACU
4.			
5.			
6.			
7.			
	75	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Sassafras albidum	20	Yes	FACU
2. Rosa multiflora	25	Yes	FACU
3. Robinia pseudoacacia	15	Yes	FACU
4.			
5.			
6.			
7.			
	60	= Total Cover	

Herb Stratum (Plot size: 5-foot radius)			
1. Allaria petiolata	35	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Parthenocissus quinquefolia	30	Yes	FACU
2. Toxicodendron radicans	10		FAC
3. Celastrus orbiculatus	25	Yes	UPL
4.			
	65	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling area is within a recently cleared portion of the site.

SOIL

Sampling Point: U7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]		
0-20	2.5Y 6/6							
0-8	2.5Y 6/3							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: W8

Investigator(s): William Kenny Associates LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave

Slope (%): ~2 Lat: 41.093868 Long: -73.809330 Datum: NAVD88

Soil Map Unit Name: Ridgebury, Leicester, Whitman NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Though the sampled area has a low density of wetland vegetation due to the stream velocity, the system exhibits wetland hydrology and soil indicators. As such, the area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 0.5	
Water Table Present?	Yes X	No _____	Depth (inches): 4	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0	**Wetland Hydrology Present?** Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sampling point is within the rocky headwater stream, along the bank and adjacent to a dammed portion of the watercourse.

VEGETATION – Use scientific names of plants. Sampling Point: W8

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	70	Yes	FACU
2. Ulmus americana	5		FACW
3. Fagus grandifolia	20	Yes	FACU
4.			
5.			
6.			
7.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Rosa multiflora	5		FACU
2. Berberis thunbergii	5		FACU
3. Lingustrum vulgare	25	Yes	FACU
4.			
5.			
6.			
7.			
	35	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Allaria petiolata	5		FACU
2. Impatiens capensis	5		FACW
3. Symplocarpus foetidus	20	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	5	Yes	FAC
2. Parthenocissus quinquefolia	15	Yes	FACU
3.			
4.			
	20	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 30 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is sparse within the system due to the water flow.

SOIL

Sampling Point: W8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 3/1							
3-8	2.5Y 4/4							
8-14	5Y 8/1	80	5Y 7/6	20				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- X Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- X Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 14

Hydric Soil Present? Yes X No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Property Z169 City/County: Mount Pleasant Sampling Date: 6/20/18

Applicant/Owner: Fareri Associates, LP / North 80 LLC State: NY Sampling Point: U8

Investigator(s): William Kenny Associates, LLC Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear slope

Slope (%): ~ 15-20 Lat: 41.094004 Long: -73.809127 Datum: NAVD88

Soil Map Unit Name: Hollis-Chatfield Rock Outcrop; Udorthents NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

Sampling point is on a moderately sloping upland hillside near an existing asphalt drive.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: U8

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga canadensis	5		FACU
2. Acer saccharum	90	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Acer saccharum	10	Yes	FACU
2. Lingstrum vulgare	15	Yes	FACU
3. Robinia pseudoacacia	5		FACU
4.			
5.			
6.			
7.			
	30	= Total Cover	
Herb Stratum (Plot size: 5-foot radius)			
1. Allaria petiolata	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30-foot radius)			
1. Celastrus orbiculatus	5	Yes	UPL
2. Toxicodendron radicans	5	Yes	FAC
3.			
4.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 17% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: U8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/2							
6-14	2.5Y 5/4							
14-20	2.5Y 6/4							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

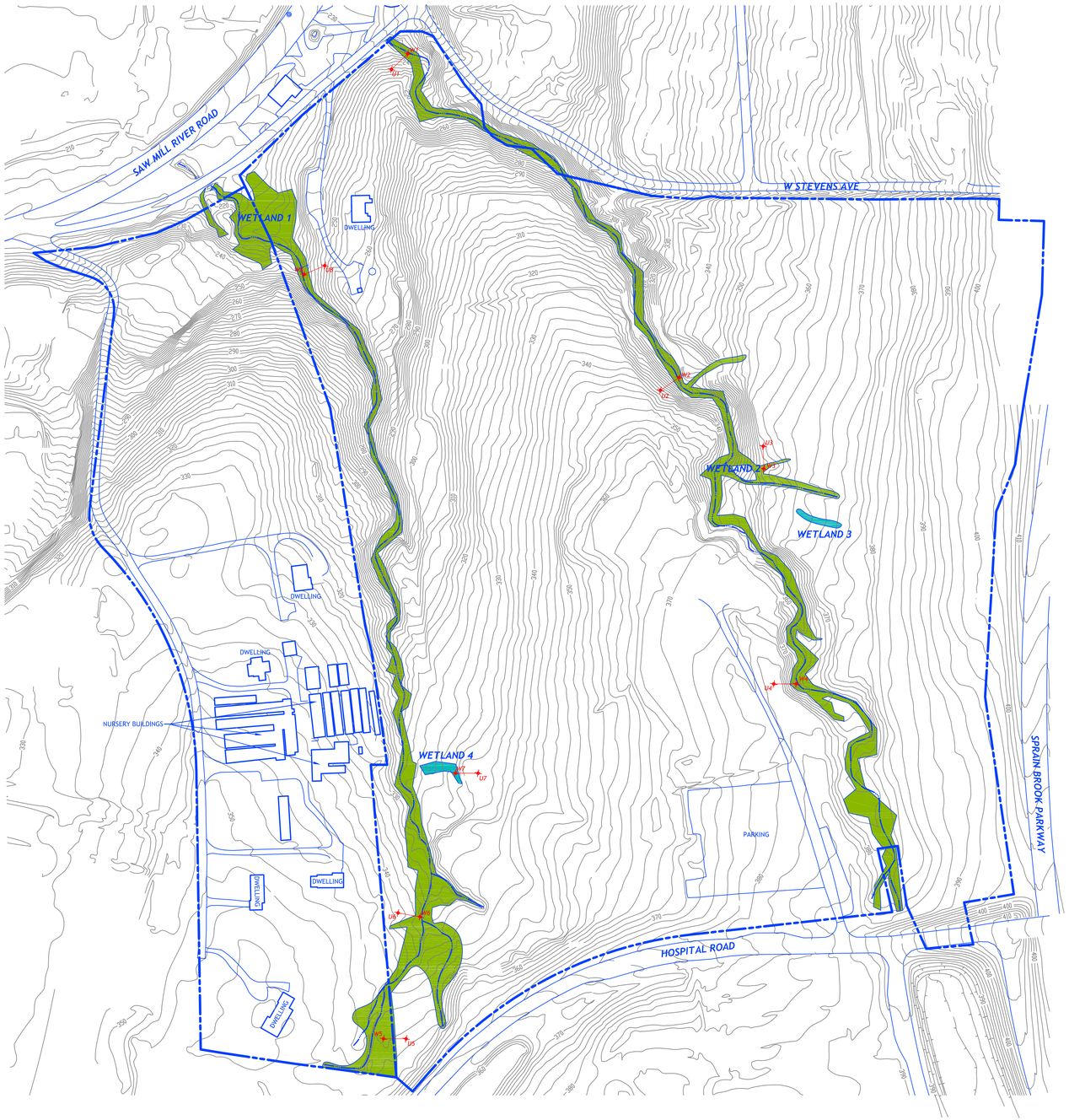
Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:



LEGEND

- LOCAL WETLANDS/JURISDICTIONAL FEDERAL WETLANDS
- LOCAL WETLANDS/NON-JURISDICTIONAL FEDERAL WETLANDS
- WATERCOURSE
- WETLAND BOUNDARY
- TRANSECT AND DATA PLOT (W1 – U1)
- PROJECT PROPERTY BOUNDARY

NOTES

- EXISTING CONDITIONS INFORMATION (INCLUDING WETLAND AND WATERCOURSE BOUNDARIES) TAKEN FROM A SURVEY PREPARED BY WARD CARPENTER ENGINEERS, INC AND DATED MAY 24, 2017.
- WETLAND BOUNDARIES WERE FIELD LOCATED AND MARKED BY WILLIAM KENNY ASSOCIATES LLC IN MAY 2018.

WILLIAM KENNY ASSOCIATES LLC

SOIL SCIENCE
ECOLOGICAL SERVICES
LAND USE PLANNING
LANDSCAPE ARCHITECTURE

195 TUNXIS HILL
CUTOFF SOUTH
FAIRFIELD, CT 06825
PHONE: 203 366 0588
FAX: 203 366 0067
www.wkassociates.net

FEDERAL WETLAND & WATERCOURSE DELINEATION MAP

OWNER:
GATEWAY DEVELOPMENT

LOCATION:
TAX PARCELS: 116.8-1-9, 111.20-1-80, 116.8-1-3, 116.8-1-4, 116.8-1-5, 116.8-1-6, 116.8-1-7, 116.8-1-8
PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: AUGUST 28, 2018
SCALE: 0' 5' 10'

NORTH

REF. NO. 3836

Property Z169
Hospital Road
Mount Pleasant, NY 10532

United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation Plot ID W1

Federal Wetland Delineation Plot ID U1

Property Z169
Hospital Road
Mount Pleasant, NY 10532

United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation Plot ID W2

Federal Wetland Delineation Plot ID U2

Property Z169
Hospital Road
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United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W3

Federal Wetland Delineation U3

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United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W4

Federal Wetland Delineation U4

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United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W5

Federal Wetland Delineation U5

Property Z169
Hospital Road
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United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W6

Federal Wetland Delineation U6

Property Z169
Hospital Road
Mount Pleasant, NY 10532

United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W7

Federal Wetland Delineation U7

Property Z169
Hospital Road
Mount Pleasant, NY 10532

United States Army Corps of Engineers Wetland Delineation
Site Photos

Federal Wetland Delineation W8

Federal Wetland Delineation U8

PROPERTY Z169
MOUNT PLEASANT, NEW YORK

ECOLOGICAL ASSESSMENT REPORT

PREPARED FOR:

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Greenwich, CT

PREPARED BY:

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195 TUNXIS HILL
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FAIRFIELD, CT 06825

May 25, 2018

Ref. No. 3836

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

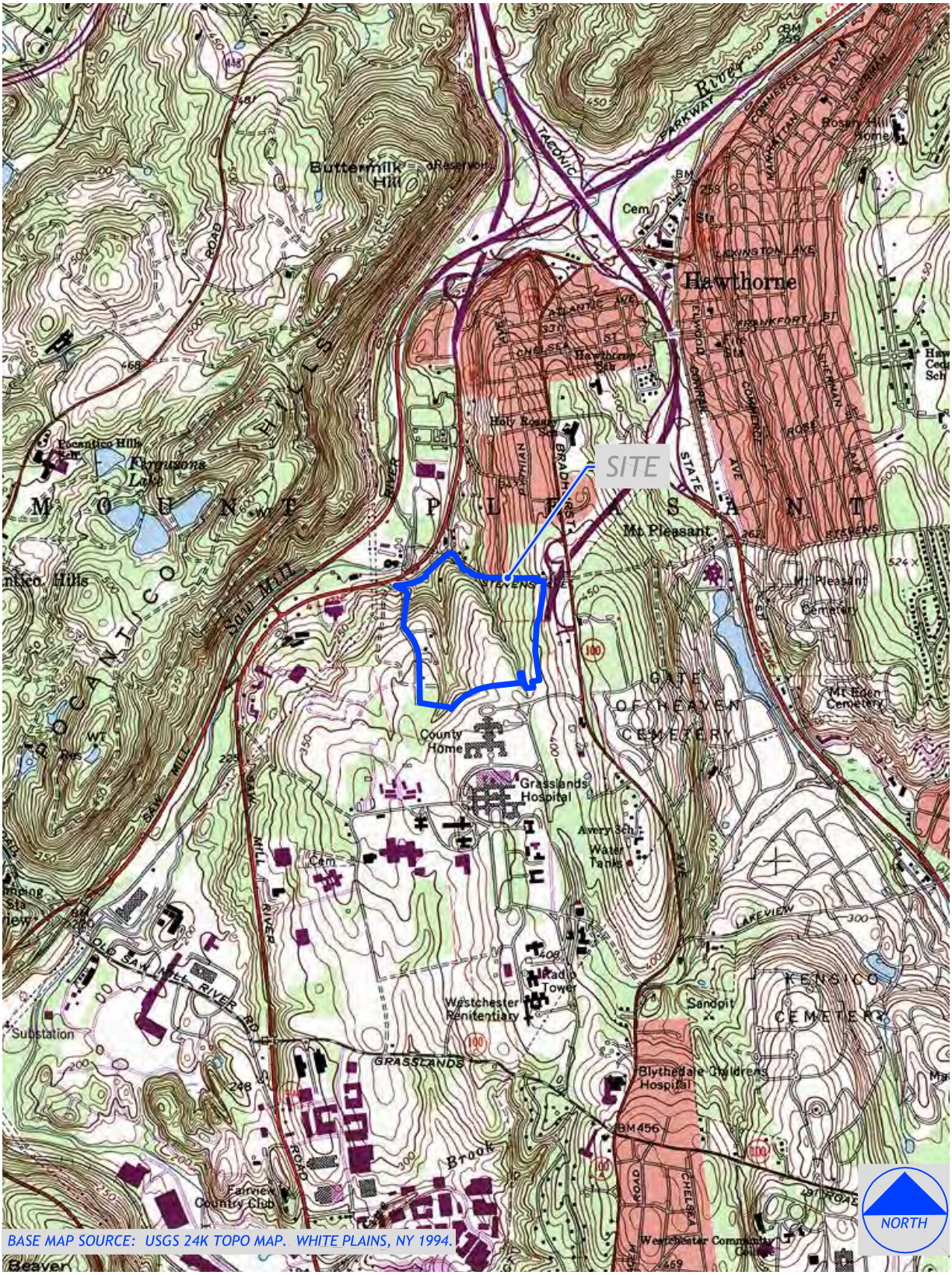
On behalf of Gateway Development, William Kenny Associates LLC (WKA) completed an ecological assessment and wetland and watercourse delineation of existing conditions for an approximately 79.0-acre property in central Westchester County in February, March and April of 2018. The purpose of this assessment was to identify and delineate all of the regulated wetland and watercourse systems within the study area and characterize and assess these systems as well as non-wetland areas. The following report provides information as to the ecological communities on the study area and the regulatory implications of the onsite wetlands and watercourses.

The subject property is located in the central portion of Westchester County in the Town of Mount Pleasant, New York (Figure 1). The property is bordered on the north by West Stevens Avenue, on the northwest by Old Saw Mill Road South, on the west by Nilsson Drive, on the south by Hospital Service Road and on the east by Sprain Brook Parkway. Existing improvements at the property are concentrated in the north, along the western property boundary and to the south and consist of several single-family residences, a small nursery, storage sheds, an in-ground pool, asphalt drives and parking areas and related improvements.

The site lies within the watershed of Saw Mill River, which drains to the Hudson River approximately 11 miles southwest of the site. Saw Mill River extends and flows northwest of the site, approximately 200 feet from the northern property boundary. Both wetland and watercourse systems exit the site to the north, draining directly into Saw Mill River.

The subject property is comprised primarily of undeveloped vegetated upland and wetland areas. Two types of wetland and watercourse systems were observed (predominantly rocky headwater streams), and nine types of upland communities were identified (beech-maple mesic forest, successional hardwood forest, successional old field, successional shrubland, disturbed beech-maple mesic forest, brushy cleared land, construction/maintenance spoils, paved road/paking lot and mowed lawn with trees). Wetland and watercourse areas were field marked and their approximate boundaries, and are depicted on Figure 2. All ecological communities are depicted in Figure 3.

FIGURE 1: STUDY AREA LOCATION MAP



BASE MAP SOURCE: USGS 24K TOPO MAP. WHITE PLAINS, NY 1994.

The presence of wetlands and watercourses on the subject property triggers the potential for jurisdiction from a federal (Army Corps of Engineers (Corps)), state (New York State Department of Environmental Conservation (DEC)), and local (Town of Mount Pleasant) level. No wetlands at the site are classified as DEC regulated wetlands. However, the two-onsite watercourses are state regulated streams. Thus, the two entities that regulate the onsite wetlands are the Corps and the Town of Mount Pleasant. All but two of the delineated wetlands at the property are federally regulated wetlands. There are no mapped state wetlands in the study area. None of the wetlands exceed the size threshold of 12.4-acres or present a unique wetland ecosystem. Information regarding the regulated wetlands and watercourses on the subject property is provided in the following table (Table 1).

Table 1: Wetland and Watercourse Regulatory Jurisdiction

ID NO.	Site Location	Watershed	Jurisdiction		
			ACOE	NYSDEC	TOWN
1	E	Saw Mill River	Yes	No	Yes
2	W	Saw Mill River	No	No[1]	Yes
3	E	Saw Mill River	Yes	No	Yes
4	W	Saw Mill River	No	No	Yes

[1]*The wetland watercourse system is not NYSDEC regulated but a Protection of Waters Permit is needed due to disturbance.*

WKA also performed an investigation to determine the presence or absence of state or federal plant and animal species listed as endangered, threatened or of special concern. No such species were observed or detected to be present. Moreover, a review of the New York State Department of Conservation Environmental Resource Mapper confirmed that neither rare plants or animals nor significant natural communities, including vernal pools, have been identified at or within approximately one mile of the property.

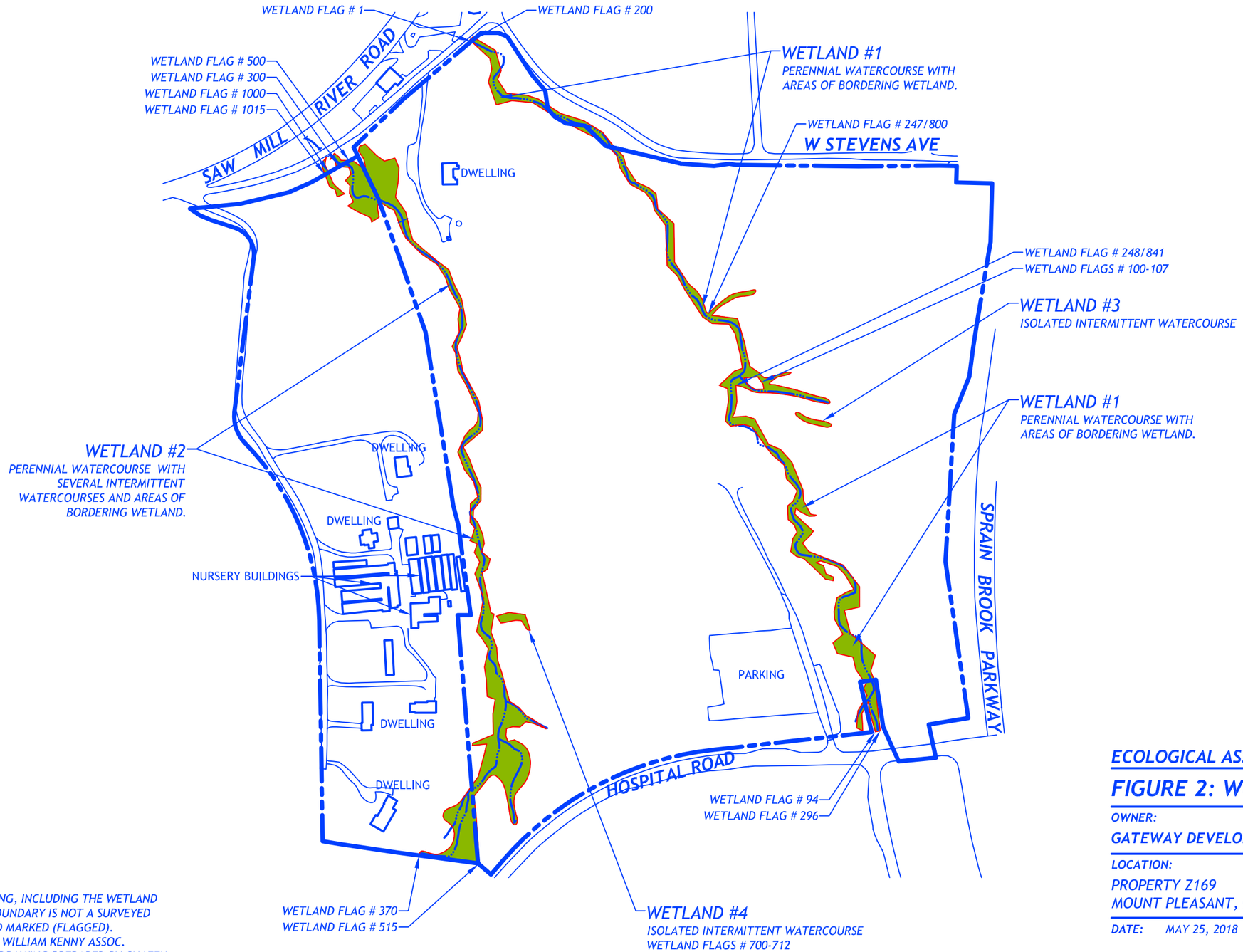
1.0 INTRODUCTION

On behalf of Gateway Development, William Kenny Associates LLC (WKA) completed a wetland and watercourse delineation and an assessment of existing ecological conditions of an approximately 79.0-acre property located in Mount Pleasant, New York. The wetland and watercourse delineations were conducted in accordance with the laws and regulations of the U.S. Army Corps of Engineers (Corps), the New York State Department of Environmental Conservation (DEC) and the Town of Mount Pleasant, New York.

The ecological assessment was conducted to inventory and evaluate onsite natural resources including wetlands, watercourses, wildlife and their habitat, soils, and geologic and hydrologic conditions. The work was completed through the review of readily available publications and public agency databases as well as several onsite investigations. Field investigations were completed in February, March and April 2018. The weather conditions at the time of the site investigations varied from clear to overcast while air temperatures ranged from the 40s to 50s Fahrenheit. Investigations were conducted on foot and observations were made while walking systematically through the property and along and within critical habitats (i.e. wetlands, watercourses and significant topographic features). William L. Kenny and Timothy F. Veit completed the assessment, delineation work and the preparation of this report. Resumes for these individuals are provided in Appendix A.

2.0 WETLAND & WATERCOURSE REGULATORY REQUIREMENTS

The study area was investigated to determine the presence and extent of jurisdictional wetlands and waterbodies in accordance with the requirements of applicable regulatory agencies. According to the completed investigation, the study area includes Corps and Town regulated wetlands and Corps, DEC and Town regulated watercourses. The identified upland, wetland and watercourse areas are shown on Figure 2 (*Wetland Map*).



NOTES:

- *INFORMATION SHOWN ON THIS DRAWING, INCLUDING THE WETLAND BOUNDARY, IS APPROXIMATE. THE BOUNDARY IS NOT A SURVEYED REPRESENTATION OF WHAT WAS FIELD MARKED (FLAGGED).*
- *WETLAND INFORMATION PROVIDED BY WILLIAM KENNY ASSOC. OTHER INFORMATION TAKEN FROM A DRAWING PREPARED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.*

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ECOLOGICAL ASSESSMENT REPORT

FIGURE 2: WETLAND MAP

OWNER:
GATEWAY DEVELOPMENT

LOCATION:
PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: MAY 25, 2018

NORTH

REF. NO. 3836

Wetland and watercourse boundaries were demarcated (flagged) at the property with strips of pink surveying tape hung from vegetation or with small flags on wire stakes that are generally spaced a maximum of every 50 feet. The flags are sequentially numbered. Wetland and watercourse boundaries are located along the lines that connect these flags. The boundary locations are subject to change until adopted by the regulatory agencies. The adoption process includes the accurate mapping of the delineated boundaries by a licensed surveyor and, generally, a field review of the surveyed boundaries by representatives of each agency. The surveyed locations of the delineated boundaries are shown on Figure 2. The following is a summary of the applicable regulatory definitions and requirements, which were the basis for the completed wetlands and watercourse delineations.

2.1 Federal Requirements

Section 404 of the Clean Water Act (CWA) authorizes the Corps to regulate certain activities within the Waters of the United States (WUS). Waters of the United States include wetlands, streams, ponds and other surface waterbodies. The Corps defines wetlands based on a three-parameter approach; wetland (hydric) soils, wetland (hydrophytic) vegetation, and wetland hydrology as presented in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1987 Manual). In order for an area to be identified as a wetland under the Corps approach, all three criteria must be met. The Corps regulates any wetland that meets the three criteria, regardless of size. However, the Corps does not regulate isolated wetlands or wetlands created for stormwater management purposes in formerly nonwetland areas. Isolated wetlands are wetlands separated from WUS by natural upland features other than river berms and beach dunes or wetlands with no significant nexus (e.g. surface water outlet).

The Corps uses the presence or absence of an ordinary high water mark or bed and bank to determine surface waters (e.g. ponds and streams), including intermittent watercourses. Wetland vegetation need not be present to complete a waterbody determination. The Corps' jurisdiction ends at the boundaries of Waters of the United States. It does not extend to upland areas regardless of the juxtaposition to other wetlands or watercourses. Federally regulated wetland/watercourse areas were identified on the subject property in accordance with the United States Army Corps of Engineers 1987 Manual and the 2012 Regional Supplement to the Corps

of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. Delineation data sheets, photos and map are provided in Appendix B.

Section 404 of the CWA authorizes the Corps to regulate the discharge of dredged or fill material into WUS. The Corps uses three types of permits: nationwide permits and individual permits. Nationwide permits are granted based upon specifically prescribed wetland and watercourse disturbances for 54 types of projects. The thresholds for the established types of projects have been deemed by the Corps to present little to no environmental impact. Should a project exceed these thresholds, a permit is still possible under an individual permit. The individual permitting process is more involved and includes a public notice and comment period.

2.2 State Requirements

The DEC protects freshwater wetlands in the State of New York under Article 24 of the Environmental Conservation Law. The Act defines wetlands "as lands and submerged lands commonly known as swamps, sloughs, bogs and flats which support wetland vegetation." Based on the New York State Wetlands Delineation manual, the primary criterion for wetland delineation is determined by the presence of hydrophytic vegetation. However, field verification of wetlands may be supported by the presence of hydric soils and wetland hydrology, as per the Corps 1987 manual. Under Title 3 of the Act, freshwater wetlands with an area of 12.4 acres or more are regulated by the DEC. Wetlands less than 12.4 acres may also be regulated, if they are determined to be of unusual importance. No state wetlands are located on the subject property but the western rocky headwater stream is protected by the DEC. Under the Protection of Waters Program, waters of the state with a quality classification of AA, A, B or a classification of C with a standard of (T) or (TS) are protected. However, waters that are a C without the (T) and (TS) standard and lower are protected if they drain into a downstream protected aquatic system.

2.3 Local Requirements

The Town of Mount Pleasant protects wetlands and watercourses under §111-2 of the *Code of the Town of Mount Pleasant*. The *Code* defines wetlands as "all lands and submerged lands known as bogs, marshes, swamps, fresh meadows and estuarine areas having types of soils such as alluvial land, Carlisle muck, Limerick and Sloan, including adjacent and peripheral land

with vegetation evidencing the same habitat, whether inundated at any given time or not…" Watercourses are defined as "any waterbody, natural or artificial, such as but not limited to a pond, reservoir, lake, stream or brook."

3.0 SITE LOCATION, SURROUNDINGS & LAND USE

The subject property is located in the central portion of Westchester County in Mount Pleasant, New York. The property is bordered on the north by West Steven Avenue, on the northwest by Old Saw Mill Road South, on the west by Nilsson Drive, on the south by Hospital Service Road and on the east by Sprain Brook Parkway. Access to the property is gained to the south from Hospital Service Road, from the west via Nilsson Drive and from the north via Old Saw Mill River Road South. Improvements, including several dwellings, a small nursery and asphalt drives and parking areas, are concentrated in the western portion of the property. An asphalt parking lot is also present in the southern portion of the property adjacent to Hospital Road while a single-family dwelling and asphalt drive is present in the northern portion of the property. This remainder of the property consists of old field areas, shrubland areas, woodland areas, forested areas and wetlands and watercourses.

Land use in the area is mixed. Residential communities are located north of the property while relatively large commercial enterprises are located to the west. To the south is the Valhalla campus of Westchester Medical Center and New York Medical College. Sprain Brook Parkway runs along the eastern border of the property.

4.0 HYDROGEOMORPHIC CONDITIONS

4.1 Landform and Drainage

The site lies within the watershed of the Saw Mill River watershed, which drains to the Hudson River approximately 11 miles southwest of the site. The site does not drain to a drinking water supply of New York City, thus the property is not subject to New York City Department of Environmental Protection (DEP) regulations. The Saw Mill River extends and flows northwest of the site, approximately 200 feet from the northern property boundary. Both wetland and watercourse systems exit the site to the north, flowing beneath Old Saw Mill River Road and Saw Mill River Road via stormwater culverts before draining into Saw Mill River.

The study area is located in the northern portion of the Manhattan Hills ecozone of New York State, close to the transition to the Hudson Highlands ecozone (Dickson 1979, Will et al. 1979). Ecozones are specific regions that differ primarily based on location, climate and geomorphic conditions. There are thirty to forty ecozones in New York. The Manhattan Hills ecozone is located in Westchester County, while the Hudson Highlands ecozone is located generally in Putnam and portions of Orange and Rockland Counties. This ecozone is characterized by its relatively mild climate (because of its southern location in the state and its relatively close proximity to the Atlantic Ocean) and its north-to-south aligned ridge and valley topography.

In general, the site drains to the north toward Old Saw Mill River Road. The south-central portion of the property is relatively level and the grade is moderate to severe to the north. Two small streams that extend and flow south to north in the western and eastern portions of the property have over thousands of years eroded deep ravines. The majority of surface and subsurface water at the site drains into these two watercourses; water in the eastern and east-central portion of the property flows into the eastern system and water in the western and west-central portion of the property flows into the western system. Both systems drain into Old Saw Mill River offsite to the north, which is a class C(T) stream per the DEC.

4.2 Geology

The study area is located in the New England Uplands physiographic province. The site is underlain by bedrock that is primarily shists of the Manhattan Formation. The study area is not bedrock controlled as a relatively deep layer of glacial till overlays the bedrock.

Surficial materials at the site consist of dense glacial till over much of the vegetated areas. Artificial fill, including construction debris, over glacial till is present is the central, south-central and western portions of the property. Glacial till is unsorted material of various sizes (clay particles to boulders) and shapes that was transported and deposited by glacial ice. Two major types of till are possible: lodgement and ablation. Lodgement includes compacted layers that usually begin 20 to 30 inches below the surface and continue with depth. Because of the compacted layers, groundwater may intermittently perch directly above the layers. Ablation till is deposited by melting ice at the margins of the glacier and does not include compacted

layers. The site contains primarily lodgement till that is deposited by the movement of the overriding ice sheet, which sculpted the drumlin landform from the preexisting landscape and the sediment the ice sheet carried.

4.3 Soils

A variety of soil types are found at the study area. The soils differ primarily based on their slope (nearly level to exceeding 40 percent), drainage class (well drained to very poorly drained), and parent material (glacial till and artificial fill). These conditions are common in the area and do not represent any unusual condition. The location and scope of these types were mapped (Figure 3) and reveal a general agreement with the survey published by US Natural Resource Conservation Service. Soil types found at the study area and their primary characteristics are noted in Table 2.

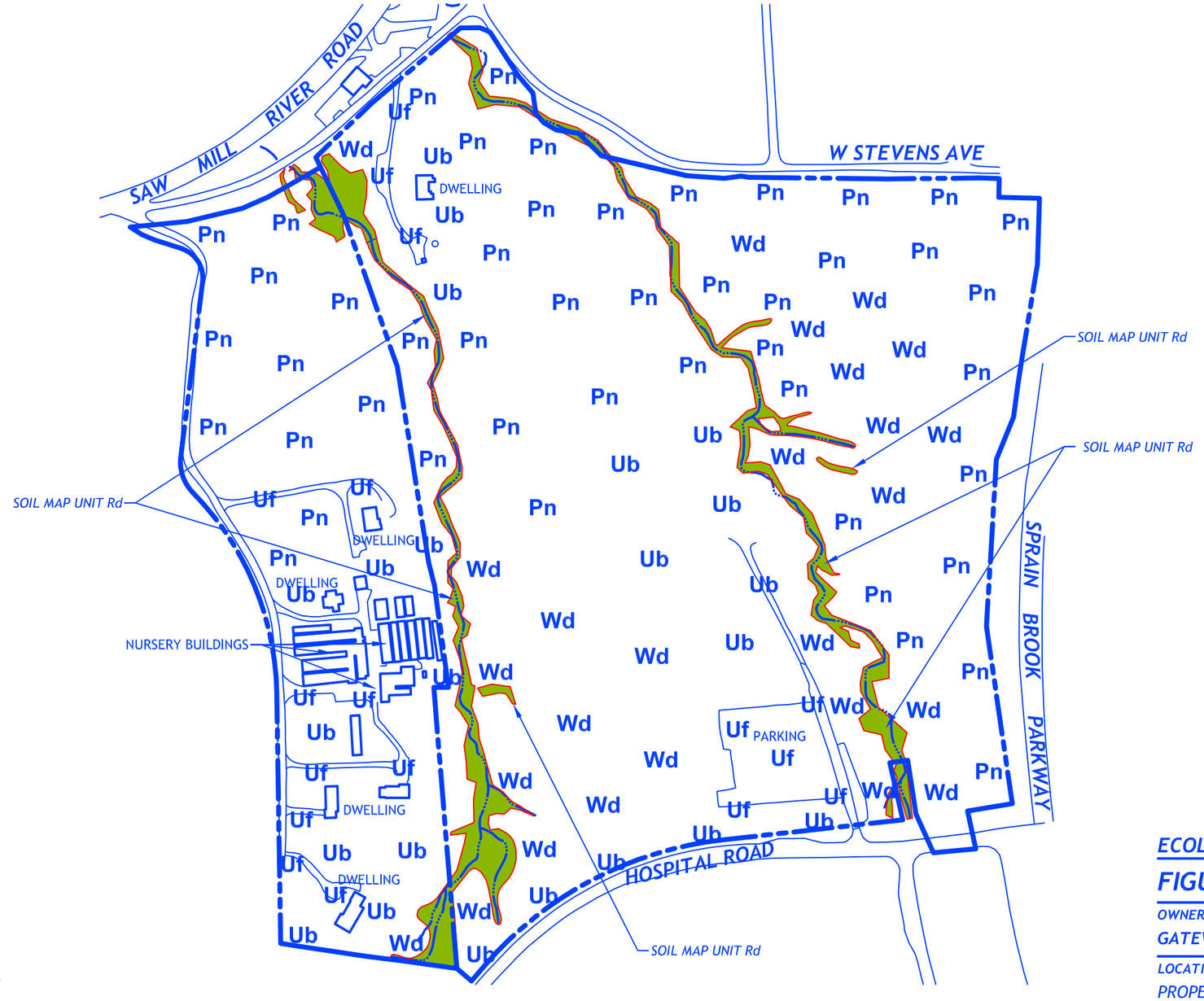
SOIL LEGEND:

UPLAND:

Pn	PAXTON FINE SANDY LOAM
Ub	UDORTHENTS, SMOOTHED
Uf	URBAN LAND COMPLEX
Wd	WOODBRIDGE LOAM

WETLAND:

Rd	RIDGEBURY LOAM



NOTES:

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- *SOIL INFORMATION PROVIDED BY WILLIAM KENNY ASSOC. OTHER INFORMATION TAKEN FROM A DRAWING PREPARED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.*
- ***Pn, Ub, Wd** AND **Rd** ARE SOIL MAPPING UNIT SYMBOLS.*

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ECOLOGICAL ASSESSMENT REPORT

FIGURE 3: SOILS MAP

OWNER:

GATEWAY DEVELOPMENT

LOCATION:

PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: MAY 25, 2018

NORTH

REF. NO. 3836

Table 2: Soil Properties

Map Unit Sym.	Map Unit Name	Parent Material	Slope (%)	Drainage Class	High Water Table Depth (ft)	High Water Table Kind	High Water Table Mos.	Depth To Bedrock (in)
Upland Soil								
Pn	Paxton fine sandy loam	Compact Glacial Till	2-45	Well Drained	1.5->6.0	Perched	Feb-Apr	>60
Ub	Udorthents, smoothed	Excavated or Filled Soil (>2 feet)	0-40	Well Drained to Somewhat Poorly Drained	1.5->6.0	Apparent	Nov-May	>60
Uf	Udorthents-Urban Land Complex	Excavated or Filled Soil (>2 feet)	0-15	Well Drained to Somewhat Poorly Drained	1.5->6.0	Apparent	Nov-May	>60
		Pavement & structures account for 85% or more of the area. Additional investigations required to determine characteristics						
Wd	Woodbridge loam	Compact Glacial Till	0-15	Moderately Well Drained	1.5-2.5	Perched	Nov-May	>60
Wetland Soil								
Rd	Ridgebury loam	Compact Glacial Till	0-8	Poorly Drained, Somewhat Poorly Drained	0.0-1.5	Perched	Nov-May	>60

5.0 ECOLOGICAL COMMUNITIES

Eleven distinct ecological communities, identified by primary vegetative cover type, were identified at the property (Figure 3). These areas are comprised of upland (U) and wetland (W) communities, and are common to the region and the state, according to the New York State Natural Heritage Program (NYNHP). The symbol, size, name and state and global rarity rank of each community are provided in Table 3.

Table 3: Ecological Communities

SYM.	SIZE (AC)	NAME	Global Ranking	State Ranking
UPLAND COMMUNITIES				
U1	25.6	BEECH-MAPLE MESIC FOREST	G4	S4
U2	8.3	SUCCESSIONAL HARDWOOD FOREST	G5	S5
U3	7.5	SUCCESSIONAL OLD FIELD	G5	S5
U4	7.2	SUCCESSIONAL SHRUBLAND	G5	S5
U5	3.1	BEECH-MAPLE MESIC FOREST (NATURALLY DISTURBED)	G4	S4
U6	4.0	BRUSHY CLEARED LAND	UC[1]	UC
U7	2.7	CONSTRUCTION/ROAD MAINTENANCE SPOILS	UC	UC
U8	2.6	PAVED ROAD/PARKING LOT	UC	UC

U9	*14.3*	*MOWED LAWN WITH TREES*	*UC*	*UC*
TOTAL ACREAGE	*75.2*			
WETLAND COMMUNITIES				
W1	*1.6*	*ROCKY HEADWATER STREAM*	*G4*	*S4*
W2	*2.1*	*ROCKY HEAD WATER STREAM*	*G4*	*S4*
W3	*0.03*	*RED MAPLE HARDWOOD SWAMP*	*G5*	*S4S5*
W4	*0.04*	*RED MAPLE HARDWOOD SWAMP*	*G5*	*S4S5*
TOTAL ACREAGE	*3.8*			

[1]*UC = Unranked Cultural*

The NYNHP global and state ranks are believed by the NYNHP to accurately reflect the relative rarity of each community. The global rank reflects the rarity of the community throughout its natural range and the state rank refers only to occurrences within New York State. A rank of "1" is for the rarest of species, those generally vulnerable to extinction or extirpation. A rank of "4" is for species that are apparently secure throughout their range or in New York and a rank of "5" is for species demonstrably secure throughout its range or in New York. The NYNHP classification system does not have associated regulations, but are meant for informational and characterization purposes only. All the communities within the project area are ranked 4 or 5, both globally or state-wide, indicating there are no significant natural communities present.

An ecological community is "a variable assemblage of interacting plant and animal populations that share a common environment" (Edinger et al. 2002). Classifications of these types of systems are prevalent in the literature, and allows for the presentation of information in a clear and brief format. In addition to the NYNHP descriptors, two additional classification systems were used to evaluate the onsite wetland areas: the Hydrogeomorphic (HGM) approach and the United States Fish and Wildlife Service (USFWS) system. The HGM[1] system groups communities according to their hydrologic and geomorphic conditions, and is useful for identifying and accessing the physically-based functions of wetlands. The USFWS classification system includes vegetation and other modifiers, which are useful in understanding biological (flora and fauna) aspects of wetlands. The wetland classifications for the jurisdictional (state and/or federal) wetlands communities are provided in Table 4.

[1] A discussion of the potential of each wetland area to contribute to recognized wetland functions is presented in Section 6.0.

Table 4: Wetland and Watercourse Classifications

COMMUNITY - WETLAND NUMBER	CLASSIFICATION		
	NYNHP	HGM	USFWS
W1	Rocky Headwater Stream	Riverine	Riverine, Upper Perennial, Rock Bottom, Cobble-Gravel, Permanently Flooded
W2	Rocky Headwater Stream	Riverine	Riverine, Upper Perennial, Rock Bottom, Cobble-Gravel, Permanently Flooded
W3	Isolated Intermittent Watercourse	Slope	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Saturated
W4	Isolated Intermittent Watercourse	Slope	Palustrine, Forested, Broad-leaved Deciduous, Seasonally Saturated

Ecological communities at the site were mapped using field observations, collection of field data, and remote sensed data (aerial photographs and topographic surveys). Descriptions of the upland and wetland communities are presented below and their locations are shown on Figure 4. The majority of the site is comprised of upland communities, with 70.8-acres or 93 percent of the property comprised of uplands and 5.1 acres of regulated wetlands and/or watercourses. Lists of observed vegetation and expected wildlife species are provided in Appendix C.

5.1 Upland Ecological Communities

U1 –Beech-Maple Mesic Forest

The beech-maple mesic forest community is present in the northeastern, eastern and western portions of the property. Hardwood canopy trees that are codominated by sugar maple and American beech characterize this community. However, sugar maples are at a significantly lower density than beeches at the site. Red oaks, black oaks, white oaks, black cherry, shagbark and pignut hickory and American elm are present within the community. In the western portions of the community, ironwood, American holly and red maple are common, in addition to the aforementioned species. In general, the percent canopy cover is fairly high (approximately 80 to 90 percent) and tree snags and fallen trees are present at a significant concentration of approximately three per acre. A shrub layer is essentially nonexistent through the eastern

portions of the community; isolated stands of invasive species such as privet, multiflora rose, wineberry and burning bush as well as native spicebush. The western portion of the community has a mild density of native species such as dogwood, arrowwood vinburnum and witchazel. The native greenbriar is very common in the southwestern portion of the property. Woody vines, including posion ivy and the invasive oriental bittersweet and porcelainberry, are also dense in various portions of the community. Ground cover is for the most part absent except for the occasional invasive garlic mustard and native trout lilly. Soils are fine sandy loams and surface boulders are present in low density throughout the community, though increases in abundance near the rocky headwater streams.

Due to the variety of vegetation and relatively undisturbed nature of this upland area, the community has a typical potential for wildlife use. The more mature trees that are present at a mild density within the forest may provide nesting, shelter and a food source for a variety of arboreal and semi-arboreal animals, while the mast crop provides a food source for white-tailed deer and turkey. Many trees contain cavities, excavated by woodpeckers or other natural means, which are utilized by a wide variety of arboreal and semi-arboreal mammals, such as white-footed deer mice, flying squirrels, gray squirrels and red squirrels. Avian species common to these physical structures include Northern Flicker, White-breasted Nuthatch and House Wren, in addition to the sparrow hawk, screech owl, and the saw-whet owl.

The downed and standing tree boles present throughout this upland community provides a food source for a wide variety of insects and fungi. These primary producers (fungi) assist in the breakdown of organic matter, replenishing soil nutrients and completing the microbial loop. Bacteria, while specifically decomposers, also provide a food source themselves for higher trophic level species.

U2 – Successional Hardwood Woodland

This community is a relatively narrow band immediately north and west of the successional oldfield. Though the community is similar to the beech-maple forest, the density of vegetation and age and type of the trees differs substantially enough to designate it as separate from its upland counterpart. With the exception of numerous, mature sugar maples, black locust and oak, most trees within the community are sapling or pole timber in size and include American elm,

sugar maple, American beech, black cherry and oak. The trees present cover approximately 50 to 60 percent of the canopy and many of these trees (greater than three per acre) are snags. Unlike the beech-maple forest, shrubs are in relatively high abundance with privet, wineberry, multiflora rose, spicebush and burning bush being dominant while woody vines such as porcelainberry and oriental bittersweet are present in mild amounts. Groundcover comprised of garlic mustard, clover, wild ginger and trout lily is present throughout the woodland floor is still predominantly leaf litter. There are very few surface stones and exposed bedrock was not observed. Lastly, portions of the southern woodland appear to have been recently cleared of shrub and vine vegetation though downed trees within the community appear to have fallen from natural circumstances. Habitat opportunities are consistent with those of Upland 1.

U3 – Successional Old Field

An approximate 7.5 area of land, located in the central portion of the property, appears to have been historically disturbed and cleared due to unnatural microtopography and soil profiles. The community consists primarily of herbaceous vegetation that is dominated by invasive species such as common reed, mugwort, ragweed, Japanese knotweed, garlic mustard and clover. Other species present are native wild onion and grasses. Trees, which are primarily saplings, and shrubs include yellow birch, black birch, white ash, sugar maple, honeysuckle and multiflora rose. The trees are present at a low density throughout the community while the shrub layers range from moderate to high in density. The land is fairly level in the southern and central portions of the old field due to substantial human activity but gently slopes toward the north, transitioning to woodland. No bedrock or natural surface stones are present within the old field; surface stones present are from construction debris. Soils are divided between Paxton and Woodbridge soils but they have been clearly disturbed and are overlain with a gravelly fill mixture.

Though disturbed, the densely vegetated community provides cover and burrowing habitat for numerous avian and mammalian species, including the bobwhite quail, chipping sparrow, gray catbird, meadow vole, eastern cottontail and the white-footed mouse. Reptilian species, specifically the Eastern garter snake, were observed utilizing the community during field investigations.

U4 – Successional Shrubland

This community extends along the majority of the eastern property boundary and appears to have been part of the Beech-Maple community. However, due to disturbance (natural and/or human), it seems that a large quantity of canopy trees were brought down, increasing the amount of light reaching the forest floor and thus causing a rapid growth in invasive vines and shrubs. This most likely furthered the progression of a shrubland as more trees were killed by oriental bittersweet and porcelain berry, which are present in high densities throughout the community. Though some mature white pine, maples and oaks remain, red maple, white ash and sugar maple saplings are primary trees and are concentrated in the southern portion of the community. Multiflora rose is the dominant species within the community, in addition to other invasive shrubs such as privet, wineberry and burning bush. Groundcover is sparse but includes garlic mustard and various ferns. Surface stone coverage appears mild in certain areas, specifically in the southern portion of the community near the wetland and watercourse system. Normally, shrub thickets make exceptional habitat for white-tailed deer due to the coverage and food source they provide. However, the density of multiflora rose appears too great as no deer were observed within the community, unlike the remainder of the property. Nevertheless, the shrubland is an important shelter source for the birds and mammals in the adjacent beech-maple forest and the remaining tree stands would provide nesting habitat for woodpeckers, chickadee's and others.

U5 – Beech-Maple Mesic Forest (Naturally Disturbed)

Located in the northeastern portion of the property, this approximate 3.1-acre community appears to have historically been part of the beech-maple forest that it is surrounded by. However, similar to the successional shrubland, the area was heavily impacted by recent windstorms, resulting in the destruction of a large number of mature trees. As such, the area has become a partial woodland community due to the canopy gaps (approximately 50 percent canopy coverage), which have permitted the growth of a shrub and groundcover layer consisting of privet, multiflora rose, wineberry, spicebush, eastern woodland sedge and various grasses. Trees that remain are primarily American beech, white ash, sugar maple, red oak, red maple, American elm and white pine and generally pole-timber in size. Vines, such as poison ivy, oriental bittersweet and porcelainberry are present but concentrated in the northwestern and northeastern portions of the community. The area is relatively level and appears to be infrequently inundated and periodically saturated but the soils, a fine sandy loam formed from compact glacial till, are well drained to moderately well drained. Surface stones are present at a very low density. Though disturbed, the area provides almost identical habitat as the surrounding beech-maple

forest but, with the addition of a more substantial shrub layer and greater quantity of fallen trees, there is an increased food source for birds and deer and for fungi and bacteria, respectively.

U6 – Brushy Cleared Land

Immediately west of the paved road/parking lot and construction/road maintenance communities is an approximate 4.0-acre area of land that was previously a mix of shrubland and woodland dominated by mature and invasive vines and shrubs, such as oriental bittersweet, porcelainberry, multiflora rose and wineberry. Mugwort, ragweed, golden rod and other herbaceous vegetation were and currently are present within the community. Trees are randomly spaced, are at a mild to moderate density and are primarily pole-timber sugar maple, black birch, American beech and yellow birch, most of which are heavily covered by invasive vines. The community is gently sloping from southeast to northwest toward the adjacent wetland and watercourse system. The soils are mildly disturbed Paxton and Woodbridge soil. Old farm drains were also identified at a few locations in the central and northern portions of the community. Other than the standing trees and tree snags, which provide habitat and a food source for nesting birds and bacteria and fungi, the cleared land currently serves little ecological benefit to the property's flora and fauna.

U7 – Construction/Road Maintenance Debris

An approximate 2.7-acre area exists in the southern portion of the property that is comprised primarily of fill, gravel, sand, concrete blocks and other road maintenance and construction materials. The material has been irregularly placed on the property resulting in sharp peaks and valleys throughout this portion of the site. Construction vehicles are also present within the community. Presently, the area has very little vegetation, which is concentrated on the northern, eastern and western edges of the community and includes multiflora rose, common reed, Japanese knotweed, mugwort, ragweed and other herbaceous plants and grasses.

Though vegetation is sparse, the undulating surface topography within the debris zone provides some escape cover and vegetation allows for avian perching sites. The areas of burrowable substrate within this habitat may provide breeding areas for small mammals such as eastern cottontail rabbit, moles, voles and shrews. Other than that, the area provides little habitat value.

U8 – Paved Road/Parking Lot

Immediately south of the construction/road maintenance debris is a paved parking lot with a corresponding road. Both the lot and road are in poor condition. As such, vegetation is present along the paved edges and is present in cracks within the central portions of the lot. Vegetation includes turf grasses and weeds, specifically thale cress. Naturally, the area serves provides little to no habitat for nearby fauna.

U9 – Mowed Lawn with Trees

Mowed lawn with trees is primarily present within the southern portion of the property along Hospital Road but is also located in the western and northern portions of the property. In these areas, mowed lawn with shade and ornamental trees is found adjacent to parking areas, access ways, residential structures and commercial nursery improvements. In the western and northern portions of the property, the density of trees on the mowed lawn is greater than in the southern portion. This type of area provides some habitat, primarily to avian species such as the American robin and European starling, which forage for worms and insects in grassed areas. The trees in these areas can provide a food sources as well, for example, fruit-bearing ornamentals may provide a food source to foraging avian species. Small mammals such as rabbits, mice and squirrels may also use these areas.

5.2 Wetland Ecological Communities

Three wetland communities were delineated at the property. The wetlands and watercourses are identified in the following table, as well as Table 4: Wetland and Watercourse classifications.

Table 5: Wetland and Watercourse Primary Characteristics

ID NO.	Principal Water Source(s)	Water Table Type[2]	Vegetation Cover Type(s)
W1	Surface and shallow subsurface flow	Perched	Forested
W2	Surface and shallow subsurface flow	Perched	Forested

[2] A perched water table occurs in the unsaturated zone exists above the regional aquifer. An apparent water table, in contrast, is the regional water table where groundwater pressure is equal to atmospheric pressure.

W3	Surface and shallow subsurface flow	Perched	Woodland
W4	Surface and shallow subsurface flow	Perched	Woodland

W1- Rocky Headwater Stream

The first system is a watercourse system with area of bordering forested wetland that extends and flows south to north through the eastern portion of the property. The system enters the property from underneath Hospital Road and exits the property beneath Old Saw Mill River Road. The stream begins flowing north approximately 2,000 feet south of the property and encompasses a watershed area of about 60 acres; approximately half of this area is highly impervious. The stream has a water quality classification of C, which indicates fishing as the system's best use but due to the relatively shallow stream depth, significant fish presence is unlikely. Three intermittent watercourses intersect the system from the east in the central and northern portions of the property. The banks along the wetland and watercourse are severely steep in many areas, especially near the central portion of the property. The stream has carved away at the site for thousands of years. As such, the streambed is comprised of sand and gravel and cobble sized rock with a mild density of boulders present throughout. The watercourse is approximately five to ten feet wide in most locations and has wide depth range (3 to 24 inches). Debris such as home appliances, car parts and trash are present in and adjacent to the northern portion of the system along Stevens Avenue. Fallen trees are numerous in the northern and southern portions of the system. The bordering wetland soils are poorly to very poorly drained fine sandy loams.

Wetland vegetation is very sparse along the stream bank and intersecting intermittent watercourses due to the streambed composition. However, there are sporadic clumps of skunk cabbage and tussock sedge present in the bordering wetlands within the central and northern portions of the system. Immediately adjacent to the wetland are sparse clumps of spicebush, multiflora rose and burning bush. The southern portion of the system, by contrast, is densely vegetated with primarily multiflora rose and wineberry while native spicebush, skunk cabbage and grasses are also present in lower densities.

Due to the lack of vegetation and physical size of bordering wetland, the capacity of the wetland to provide habitat opportunities for mammals and birds are limited in the central and northern portions of the system. However, the southern portion of the system provides cover for deer, cottontails, squirrels, chipmunks and songbirds. The stream may potentially support some small, cold water fish species such as the creek chub and common shiner, though the number of these individuals present would likely be low. Microinvertebrates are also likely supported by the system and include stoneflies, midges, crayfish, caddisflies and blackflies, which are a good food source for avian species. Lastly, the fallen trees are an important habitat for fungi, bacteria and other decomposers.

W2- Rocky Headwater Stream

Similar to the eastern rocky headwater stream, this watercourse system has an area of bordering forested wetland that extends and flows south to north through the western portion of the property. The system begins from a watercourse that extends offsite to the southwest for approximately 400 feet, encompassing a watershed area of about 90 acres that is highly impervious in the southern portion of the watershed. The stream has a water quality classification C(T), indicating fishing as the system's best use and the stream is specifically a trout water. However, due to the stream depth it's unlikely there is a significant fish presence. Once onsite, the system quickly combines with two other watercourses originating from onsite drainage outlets. The banks along the wetland and watercourse are severely steep in some areas, especially near the central portion of the property, but not as substantial as the eastern watercourse. At the confluence of the three watercourses, the system widens out with a decent-sized area of bordering wetland but quickly becomes heavily channeled and spans a width between five to ten feet. The depth range and streambed composition is similar to the eastern watercourse. Concrete and other construction debris are prevalent along the western banks near the existing nursery. Large and mature fallen trees are numerous in the northern and southern portions of the system. The bordering wetland soils are poorly to very poorly drained fine sandy loams.

Wetland vegetation is sparse along the stream bank due to the streambed composition but it is denser than the eastern system. In the southern portions of the wetland, skunk cabbage, soft rush, eastern woodland sedge, tussock sedge and sensitive fern are common. A small area of

cattail is also present in the system. The banks along the stream are more heavily vegetated with shrubs including spicebush, multiflora rose, wineberry and privet. Habitat opportunities are generally consistent with those of Wetland 1. Cattails also provide cover for raccoons, the eastern cottontail and wild turkeys while blackbirds and other avian species use the plant for shelter and nesting purposes. Moreover, the woodland and tussock sedge are an important food source for local waterfowl and small birds.

W3- Isolated Intermittent Watercourse

Located in the southern portion of the disturbed beech-maple community, this system is a small and very narrow watercourse, approximately 0.03-acre in size. The topography of the system is sloping and at the time of our investigations, the surface was inundated (approximately one inch). Soils are poorly drained fine sandy loams formed from compact glacial till and surface stone coverage is nonexistent. Despite the poorly drained soils and surface inundation, it's likely the area is seasonally wet and during drier months is indistinguishable from the surrounding environment. With the exception of a few red maples and an American elm, there is some privet, wineberry and grasses. While red maple wetlands provide a number of wildlife habitat opportunities across the food web, this wetland is so physically small that the capacity for the wetland to provide habitat opportunities is extremely limited to tree nesting habitat and a food source for birds.

W4- Isolated Intermittent Watercourse

This small and narrow system is approximately 0.04-acre and is located immediately east of the western rocky headwater stream. The topography of the system is gently sloped toward the stream and has a slight depression in its southern portion; no connection exists between the system and the adjacent watercourse. At the time of the investigations, portions of the system were inundated (less than once inch depth). Similar to the eastern watercourse, the soils are poorly drained fine sandy loams formed from compact glacial till, have no surface stones are present and is likely seasonally inundated/saturated. Despite being smaller than the eastern watercourse, this system has a greater density of vegetation including red maple, American elm, spicebush, privet, eastern woodland sedge and some grasses. Deadwood is also present throughout the system. As such, this community provides more ecological benefit for birds that utilize the trees and sedges and decomposers that make use of the fallen branches than the

eastern swamp. However, the physical size of the system likely prevents the wetland from providing any substantial benefit to local fauna.

WILLIAM KENNY ASSOCIATES LLC

SOIL SCIENCE
ECOLOGICAL SERVICES
LAND USE PLANNING
LANDSCAPE ARCHITECTURE

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ECOLOGICAL COMMUNITIES

SYM.	NAME	SIZE (AC)
UPLAND COMMUNITIES		
UC1	BEECH-MAPLE MESIC FOREST	25.6
UC2	SUCCESSIONAL HARDWOOD FOREST	8.3
UC3	SUCCESSIONAL OLD FIELD	7.5
UC4	SUCCESSIONAL SHRUBLAND	7.2
UC5	BEECH-MAPLE MESIC FOREST (NATURALLY DISTURBED)	3.1
UC6	BRUSHY CLEARED LAND	4.0
UC7	CONSTRUCTION/ROAD MAINTENANCE SPOILS	2.7
UC8	PAVED ROAD/PARKING LOT	2.6
UC9	MOWED LAWN WITH TREES	14.3
	TOTAL:	75.2
WETLAND & WATERCOURSE COMMUNITIES		
WC1	ROCKY HEADWATER STREAM	1.6
WC2	ROCKY HEAD WATER STREAM	2.1
WC3	ISOLATED INTERMITTENT WATERCOURSE	0.03
WC4	ISOLATED INTERMITTENT WATERCOURSE	0.04
	TOTAL:	3.8

NOTES:
ECOLOGICAL COMMUNITIES INFORMATION PROVIDED BY WILLIAM KENNY ASSOC. OTHER INFORMATION TAKEN FROM A DRAWING PREPARED BY CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., D.P.C.

ECOLOGICAL ASSESSMENT REPORT

FIGURE 4: ECOLOGICAL COMMUNITIES MAP

OWNER:
GATEWAY DEVELOPMENT

LOCATION:
PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: MAY 25, 2018

NORTH

REF. NO. 3836

6.0 WETLAND/WATERCOURSE FUNCTIONAL EVALUATION

The biophysical elements (e.g. landscape position, geology, hydrology, substrate, and vegetation) of wetlands determine their functions and to what capacity they are performed. The functions they provide and the capacity of those functions vary from wetland to wetland. To better understand these differences as they relate to the onsite wetlands, a functional evaluation was completed for the wetlands identified. Each onsite wetland was assessed to determine its capacity to provide eight wetland functions:

1. Modification of groundwater discharge
2. Modification of groundwater recharge
3. Storm and floodwater storage
4. Modification of stream flow
5. Modification of water quality
6. Export of detritus
7. Contribution to abundance and diversity of wetland vegetation
8. Contribution to abundance and diversity of wetland fauna

The evaluation completed for this project was based in part on *The Rapid Assessment Procedure for Assessing Wetlands Functional Capacity* (Hollens and Magee 1998). This method assesses the relative importance of the wetlands for performing functions and provides a logical framework for observations, a structure for standardizing results, and a basis for achieving repeatable results among users. The results of the completed assessment for each wetland are provided in Table 6.

The classification system utilized to evaluate the functionality is based on the biophysical characteristics of the wetlands, which is primarily a function of landscape position and associated hydrology. Though differing cover types may be found within each of the delineated wetland areas, the functionality of the wetlands was assessed from a broader “macro scale” perspective, and each wetland was evaluated as a whole, as opposed to segmenting it into smaller cover type parts. The small shifts in vegetative cover types over relatively small areal extents within each wetland do not affect the overall functioning of the wetlands as much as the location and associated hydrologic position of the wetland.

Table 6: Wetland and Watercourse Functional Assessment

Wetland & Watercourse Function	*Wetland & Watercourse ID No.*[1]			
	1	*2*	*3*	*4*
Modification of groundwater discharge	*M-H*	*M-H*	*M*	*M*
Modification of groundwater recharge	*L-M*	*L-M*	*L*	*L*
Storm and floodwater storage	*L*	*L*	*L*	*L*
Modification of water quality	*L*	*L*	*L*	*L*
Export of detritus	*L*	*H*	*M*	*M*
Contribution to the abundance and diversity of wetland vegetation	*M*	*M*	*L*	*L*
Contribution to the abundance and diversity of wetland fauna	*M*	*M*	*L*	*L*

1: *H: High M: Moderate L: Low*

The capacity for the onsite wetlands to perform the wetland functions varies from wetland to wetland and from function to function. The differences are due to natural (hydrogeomorphic) and human (e.g. past and current land use activities) conditions. For a general description of each function and its potential societal value, refer to Appendix C.

7.0 ENDANGERED AND THREATENED SPECIES

The study area was investigated to determine the presence or absence of state or federal plant and animal species listed as endangered, threatened or special concern. None were observed or detected to be present at or within approximately one mile of the property. As well, no areas were identified on the subject property that was of unique composition or unusual ecological value.

8.0 CONCLUSIONS

On behalf of Gateway Development, WKA conducted an ecological assessment on the 79.0-acre property in Mount Pleasant, New York. The investigation included the identification, delineation, and assessment of regulated wetlands and watercourses; an evaluation of wetland protection laws; and mapping of vegetation & wildlife communities and soil types.

The majority of the 79.0-acre study area is undeveloped and occupied by forest and successional woodland and shrubland. Eleven common upland and wetland communities were identified at the study area. The identified wetland and watercourse systems are predominately

streams with areas of bordering wetland and are located in the eastern and western portions of the property.

The property was investigated to determine the presence or absence of state or federal plant and animal species listed as endangered, threatened or special concern. None were observed or detected to be present at or within one mile of the property. All of the identified ecosystems are considered regionally common.

9.0 REFERENCES

Brinson, M.M. (1993). *A Hydrogeomorphic Classification for Wetlands, Technical Report WRP-DE-4*. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Cadwell, Donald and others. 1986. *Surficial Geological Map of New York*. New York State Museum-Geologic Survey Maps and Chart Series #40.

Collins, Henry H. 1981. *Complete field guide to North American Wildlife-Eastern edition*. Harper & Row Publishers, Inc., New York.

Department of Environmental Conservation. July 1995. *New York State Freshwater Wetlands Delineation Manual*. 54 pp.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A. M. Olivero (Editors). 2002. *Vegetation & Wildlife Communities of New York State.* Second Edition. New York Natural Heritage Program, New York Department of Environmental Conservation, Albany, NY.

Environmental Laboratory. (1987). *Corps of Engineers Wetlands Delineation Manual*, T*echnical Report Y-87-1*. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Federal Interagency Committee for Wetland Delineation. 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication. 76 pp. plus appendices.

Fisher, Donald, Yngvar Isachsen, Lawrence Rickard. 1970. *Geologic Map of New York*. New York State Museum and Science Service Map & Chart Series #15.

Klemens, M.W. 1993. *Amphibians and reptiles of Connecticut and Adjacent Regions*. State Geological and Natural History Survey of Connecticut, Bulletin No. 112, Connecticut Department of Environmental Protection, Hartford, CT.

Klemens, M.W. 2000. *Amphibians and reptiles in Connecticut: A Checklist with Notes on Conservation Status, Identification, and Distribution*. Connecticut Department of Environmental Protection, DEP Bulletin No. 32, Hartford, CT.

Kricher, John. 1998. *A Field Guide to Eastern Forests North America*. Houghton Mifflin Company, Boston, MA.

Magee, Dennis W. and Hollands, Garrett G. 1998. *A Rapid Procedure for Assessing Wetland Functional Capacity*. Normandeau Associates Incorporated and ENSR, pg. 1-190.

Newcomb, Lawrence. 1977. *Newcomb's wildflower guide*. Little, Brown and Company, Boston, MA.

Seifried, Stefan T. 1994. *Soil survey of Putnam and Westchester Counties, New York*. United States Department of Agriculture, Soil Conservation Service.

United States Department of Agriculture. 1993. *Soil Survey Manual*. U.S. Government Printing Office.

APPENDIX A:

Resumes of Investigators and Authors

William L. Kenny, PWS, PLA
Principal

WILLIAM KENNY ASSOCIATES LLC

Mr. William L. Kenny has more than 20 years of experience in site and environmental planning and construction. Mr. Kenny is a Registered Landscape Architect, Certified Professional Wetland Scientist, a Soil Scientist and Certified Organic Land Care Professional. Prior to establishing William Kenny Associates, Mr. Kenny was a senior project manager at Triton Environmental, Inc. of Guilford, CT and a project manager at Jay Fain & Associates of Southport, CT; Divney Tung Schwalbe, LLP of White Plains, NY; Towers/Golde, PC of New Haven, CT; and Winter Ridge Nursery of Hamden, CT.

Education

University of Massachusetts, 1993-1995. Postgraduate studies in soil science.

Yale University, MEM, 1992. Masters Degree in Environmental Management. Concentration and thesis work in ecosystem ecology, hydrology, and restoration.

University of Connecticut, BS, 1987. Bachelor of Science Degree in Landscape Design.

Representative Project Experience

Wetland Delineation, Assessment, and Impact Mitigation

Mr. Kenny has extensive experience with tidal and inland wetland and watercourse delineation, assessment, and impact mitigation projects and obtaining related regulatory approvals as a project scientist and manager. Project work has included approval and construction documents for residential, commercial, recreational, and institutional developments. Specific tasks Mr. Kenny has completed include: (1) wetland delineations and functional assessments in Connecticut and New York in accordance with federal, state, and local requirements; (2) development planning and design consultation to minimize wetland impacts; (3) impact assessments and wetland construction mitigation designs; and (4) hydrologic evaluations for inland and tidal wetland restoration and creation projects.

Water Resource Management

Mr. Kenny has a wide range of experience with water resource management projects and attaining related development approvals and permits as a project manager and scientist. Project work has included stormwater pollution prevention plan preparation in accordance with New York City, New York State, and Connecticut requirements; stormwater treatment Best Management Practices design; stormwater pollutant loading and BMP effectiveness modeling; groundwater modeling for subsurface sanitary disposal systems, and erosion and sediment control plan preparation for residential, commercial, recreational, and institutional developments.

Ecological Inventories and Impact Assessments

Mr. Kenny has broad experience with preparing ecological inventories and impact

assessments and attaining related development approvals and permits as a project manager and scientist. Project work included Environmental Impact Statement (EIS) preparation to fulfill New York State requirements. Specific management or technical responsibilities included mapping and assessing existing conditions and potential impacts to bedrock and surficial geology, soils, vegetative communities, wetlands, surface and groundwater bodies, and wildlife and their habitat.

Site Planning and Landscape Architecture

Mr. Kenny has more than 20 years experience with site planning and landscape architectural projects either as the primary designer and project manager, a collaborating design professional, or construction contractor. Mr. Kenny has design and management experience with all project phases: from master planning and conceptual design to construction and bid document preparation and construction observation.

Regulatory Agency Consulting

Mr. Kenny has been retained by Connecticut municipalities to conduct analyses and prepare reports regarding inland wetlands and watercourses permit applications to be heard by local agencies. This work includes the review of wetland boundary delineations.

Professional Training

OSHA 24-hour HAZWOPER Training
Organic Land Care
CT DEP Master Wildlife Conservationist Program
Pond Management
Wetland Construction
Wetland Functional Assessment Techniques
Urban Stormwater Management Practices
Erosion and Sediment Control
Soil Sciences
Computer Aided Drafting

Publications

Kenny, W.L. 1995. The West River salt marsh: past and present. In *Proceedings of the West River Symposium*, ed. By E. McDiarmid, P.K. Barten, and C.J. Genshlea, 33-40. New Haven, CT: Center for Coastal and Watershed Systems, Yale School of Forestry and Environmental Studies.

Barten, P.K. and W.L. Kenny, 1997, The hydrologic structure and function of the West River marsh. In *Bulletin Number 100, Restoration of an Urban Salt Marsh: An Interdisciplinary Approach*, Bulletin Number 100, vol. ed. by D.G. Casagrande and bul. series ed. by J. A. Miller and J. Cappock, 103-122. New Haven, Connecticut: Yale School of Forestry and Environmental Studies.

Contributing graduate student author to:
Bormann, F.H., D. Balmori, and G.T. Geballe, 1993. *Redesigning the American lawn: a search for environmental harmony*. Yale University Press, New Haven and London.

Professional Affiliations and Registrations

Flood & Erosion Control Board, Fairfield, Connecticut (Member 2011- 2015)
Shellfish Commission, Fairfield, Connecticut (Member 1995 -2006, Chairman 1996 - 2005)
Connecticut Association of Wetland Scientist (Member 1999-present, Secretary 2001 - 2010)
Society of Soil Scientist of Southern New England (Associate Member 1995-2004, Professional Member 2004 -present)
Society of Wetland Scientists (Member 2001-present)
Certified Professional Wetland Scientist (#1372), Society of Wetland Scientists (2003-present)
Professional registration, Landscape Architecture
#664, State of Connecticut (1990-present)
#001869, State of New York (2003-present)
American Society of Landscape Architects (Member 2001-2010, 2013-present)
Northeast Organic Farming Association (2004-present)
Certified Organic Land Care Professional (2005-present)
OSHA Certified (24-hour HAZWOPER Training)

Timothy F. Veit
Ecologist

WILLIAM KENNY ASSOCIATES LLC

Mr. Timothy F. Veit has experience providing numerous environmental services, including assessing the quality and functionality of various coastal and inland ecosystems, evaluating the potential biological and environmental impacts of proposed projects, delineating wetland and watercourse boundaries and monitoring erosion and sediment control measures during project construction. Prior to this position, Mr. Veit attended Vassar College, where he worked as a biology student research fellow, studying emerald ash borer prevention methods, research that was presented at the Northeast Natural History Conference at the Eagle Hill Institute. Moreover, he participated in ecological restoration projects that focused on the removal and prevention of invasive vines and *Phragmites australis*.

Education

Vassar College, Poughkeepsie, NY, 2012-2016. Bachelor of Arts in Biology with a minor in Religion.

Representative Project Experience

Wetland Delineation, Assessment and Impact Mitigation

Mr. Veit has experience with inland and tidal wetland and watercourse delineations as well as assessing the impacts of proposed projects on the surrounding ecosystem as a project ecologist. Project work includes assisting with attaining approval and construction documents for residential, commercial, recreational and institutional developments. Specific tasks Mr. Veit has completed include: (1) wetland delineations and functional assessments in Connecticut and New York in accordance with federal, state and local standards; (2) impact assessments and for projects in coastal and inland areas.

Ecological Inventories and Assessments

Mr. Veit has experience with preparing ecological inventories and impact assessments for properties in coastal and inland areas for the purpose of assisting with attaining development approvals and permits as a project ecologist. Specific management or technical responsibilities included mapping and assessing existing conditions and potential impacts to soils, vegetative communities, wetlands, surface and groundwater bodies, wildlife and their associated habitats.

Erosion And Sediment Control

Mr. Veit has experience with erosion and sediment control protocols which include numerous visits at a variety of project sites to ensure compliance with state and town guidelines. This includes reviewing proposed erosion and sediment control measures and routine inspection of their functional status during construction.

Timothy F. Veit
Ecologist

WILLIAM KENNY ASSOCIATES LLC

Publications

Principal Author

Veit, T.F. 2016. Emerald Ash Borer (Agrilus Planipennis) Prevention and Management at the Vassar Farm and Ecological Preserve. Senior project, Vassar College Biology Department, Poughkeepsie, NY.

Veit, T.F., Sudo, N., Ronsheim, M.L. & M.E. Czesak. 2015. Utilization of biological control agents to combat the Emerald Ash Borer. Research poster, Undergraduate Research Summer Institute, Poughkeepsie, NY.

Contributing Author

Czesak, M.E., Ruiz, E.A., Veit, T.F., Ronsheim, M.L. & K.L. VanCamp. 2016. Proactive Management Plan for the Emerald Ash Borer upon Impending Invasion. Research Poster, Vassar College Biology Department, Poughkeepsie, NY.

Sudo, N., Veit, T.F. & M.L. Ronsheim. A Sign for the Edith Roberts Ecological Laboratory. Research Poster, Undergraduate Summer Research Institute, Poughkeepsie, NY.

APPENDIX B:

List of Vegetation and Wildlife

VEGETATION INVENTORY

SCIENTIFIC NAME	*COMMON NAME*
Trees	
Acer rubrum	*Red maple*
Acer platanoides	*Norway maple*
Acer saccharum	*Sugar maple*
Betula lenta	*Black birch*
Carpinus caroliniana	*American hornbeam*
Carya glabra	*Pignut hickory*
Carya ovata	*Shagbark hickory*
Catalpa speciosa	*Northern catalpa*
Chamaecyparis thyoides	*Atlantic white cedar*
Cornus florida	*Flowering dogwood*
Fagus grandifolia	*American beech*
Fraxinus americana	*White ash*
Hamamelis virginiana	*Witch hazel*
Ilex opaca	*American holly*
Liriodendron tulipifera	*Tuliptree*
Juniperus virginiana	*Eastern red cedar*
Pinus strobus	*White pine*
Prunus serotrina	*Black cherry*
Nyssa sylvatica	*Black tupelo*
Quercus alba	*White oak*
Quercus bicolor	*Swamp white oak*
Quercus Montana	*Chestnut oak*
Quercus palustris	*Pin oak*
Quercus rubra	*Red oak*
Quercus veluntina	*Black oak*
Salix spp.	*Willows*
Sassafras albidum	*Sassafras*
Tsuga canadensis	*Eastern hemlock*
Ulmus americanum	*American elm*
Zanhoxulum americanum	*Common pickly-ash*
Shrubs and Vines	
Ampelopsis brevipedunculata	*Porcelain berry*
Berberis thunbergii	*Japanese barberry*
Celastrus orbiculatus	*Oriental bittersweet*
Euonymus alatus	*Winged euonymus*
Hedera helix	*English ivy*
Ligustrum vulgare	*Common privet*
Lindera benzoin	*Spicebush*
Parthenocissus quinquefolia	*Virginia creeper*
Rhododendron maximum	*Rosebay rhododendron*
Rosa multiflora	*Multiflora rose*
Rubus phoenicolasius	*Wineberry*
Smilax rotundifolia	*Green brier*
Toxicodendron radicans	*Poison ivy*

Viburnum dentatum var. recognitum	*Northern arrowwood*
Vitis spp.	*Wild grape*

*Herbaceous Species **

Artemesia trifida	*Giant ragweed*
Artemesia vulgaris	*Common mugwort*
Asclepias syriaca	*Common milkweed*
Athyrium felix-femina	*Lady fern*
Carex blanda	*Eastern woodland sedge*
Carex stricta	*Tussock sedge*
Juncus effusus	*Soft rush*
Microstegium vimneum	*Japanese stiltgrass*
Onoclea sensibilis	*Sensitive fern*
Panicum clandestinum	*Deer-tongue grass*
Pachysandra terminalis	*Japanese pachysandra*
Poa pratensis	*Kentucky blue-grass*
Polystichum acrostichoides	*Christmas fern*
Symplocarpus foetidus	*Skunk cabbage*

•Herbaceous list not comprehensive based on seasonal contraints of field work.

WILDLIFE SPECIES LIST
OBSERVED, POTENTIALLY OCCURRING IN, OR UTILIZING VEGETATION & WILDLIFE COMMUNITIES

SCIENTIFIC NAME[1]	*COMMON NAME*

Amphibians

Ambystoma opacum	*Marbled salamander*
Ambystoma laterale	*Blue-spotted slamander*
Anaxyrus americanus americanus	*Eastern American toad*
Plethodon cinereus	*Redback salamander*
Pseudacris crucifer	*Northern spring peeper*
Rana catesbeiana	*Bull frog*
Rana clamitams	*Green frog*
Rana sylvatica	*Wood frog*

Reptiles

Agkistrodon contotrix mokasen	*Northern copperhead*
Chelydra s. serpentine	*Common snapping turtle*
Clemmys guttata	*Spotted turtle*
Coluber constrictor	*Northern black racer*
Glyptemys insculpta	*Wood turtle*
Sternotherus odoratus	*Common musk turtle*
Storeria dekayi	*Northern brown snake*
Terrapene Carolina carolina	*Eastern box turtle*
Thamnophis s.sirtalis	*Eastern garter snake*

Birds

Agelaius phoeniceus	*Red-winged blackbird*
Anas platyrhynchos	*Mallard*
Asio otus	*Long-eared owl*
Aythya collaris	*Ring-necked duck*
*Bacolophus bicolor***	*Tufted titmouse*
Bombycillidae cedrorum	*Cedar waxwing*
Bonasa umbellus	*Ruffed grouse*
Branta canadensis	*Canada goose*
*Buteo jamaicensis**	*Red-tailed hawk*
*Buteo lineatus***	*Red-shouldered hawk*
*Cardinalis cardinalis***	*Northern cardinal*
Carduelis tristis	*American goldfinch*
Carpodacus mexicanus	*House finch*
*Cathartes aura***	*Turkey vulture*
Catharus fuscescens	*Veery*
Chaetura pelagica	*Chimney swift*
Charadrius vociferous	*Killdeer*
Colaptes auratus	*Northern flicker*
Colinus virginianus	*Bobwhite quail*
Columba livia	*Rock dove*
Contopus virens	*Eastern wood pewee*
*Corvus brachyrhnchos**	*American crow*
Corvus ossifragus	*Fish crow*
*Cyanocitta cristata**	*Blue jay*
*Dumetella carolinensis**	*Gray catbird*
Euphagus carolinus	*Rusty blackbird*
Hirundo rustica	*Barn swallow*
Falco peregrinus	*Peregrine falcon*
*Junco hyemalis***	*Dark-eyed junco*
Larus delawarensis	*Ring-billed gull*
Leiothlypis ruficapilla	*Nashville warbler*
*Lophodytes cucullatus***	*Hooded merganser*
Megaceryle alcyon	*Belted kingfisher*
Melanerpes carolinus	*Red-bellied woodpecker*
Melanerpes erythrocephalus	*Red-headed woodpecker*
Meleagris gallopavo	*Eastern wild turkey*
*Parus atricappillus**	*Black-capped chickadee*
Phalacrocorax auritus	*Double-crested cormorant*
*Picoides pubescens**	*Downy woodpecker*
*Picoides pubescens**	*Hairy woodpecker*
*Quiscalus quiscala***	*Common grackle*
*Regulus satrapa***	*Golden-crowned kinglet*
*Sayornis phoebe***	*Eastern phoebe*
Scolopax minor	*American woodcock*
Setophaga ruticilla	*American redstart*
Sialia sialis	*Eastern bluebird*
Sitta carolinensis	*White-breasted nuthatch*
*Sphyrapicus varius***	*Yellow-bellied sapsucker*
*Spinus tristis***	*American goldfinch*
*Spizella arborea**	*American tree sparrow*

Spizalla passerina	*Chipping sparrow*
Stelgidopteryx serripennis	*Northern Rough-winged swallow*
Strix varia	*Barred owl*
Sturnus vulgaris	*European starling*
*Troglodytes hiemalis***	*Winter wren*
Turdus migratorius	*American robin*
Tyto alba	*Barn owl*
*Zenaida macroura**	*Mourning dove*

Mammals

Canis lutrans	*Coyote*
Didelphus virginiana	*Virginia opossum*
Glaucomys volans	*Southern flying squirrel*
Marmot monax	*Woodchuck*
Mephitis mephitis	*Striped skunk*
Microtus pennsylvanicus	*Meadow vole*
*Odocoileus virginianus**	*White-tailed deer*
Procyon lotor	*Raccoon*
*Sciurus carolinensis**	*Gray squirrel*
*Sylvilagus floridanus**	*Eastern cottontail*
Tamias striata	*Eastern chipmunk*
Tamiasciurus hudsonicus	*Red squirrel*
Urocyon cinereoargenteus	*Gray fox*
*Vulpes vulpes**	*Red fox*

* Indicates species observed either directly or by sign
** Indicates species observed near the site (<1 mile) during the winter season by local birdwatchers (Cornell Lab of Ornithology & the National Audubon Society)

APPENDIX C:

General Description of Wetland & Watercourse Functions

Modification of Groundwater Discharge:

Modification of groundwater discharge is the capacity of a wetland to influence the amount of water moving from the ground to the surface. Typically, a perennial inlet and outlet indicates that a wetland is directly linked with the regional water table and has a high capacity to perform this function. This can affect groundwater and surface water supplies and recreational activities.

Modification of Groundwater Recharge:

Modification of groundwater recharge is the capacity of a wetland to influence the amount of surface water moving to groundwater aquifers and thereby affecting public and private groundwater supplies. The subsoil and location of a site play a significant role in ability for wetlands to modify groundwater recharge. With the exception of slope wetlands, all wetlands have some capacity to contribute to this function. Poorly developed or no microrelief is an indication that the water table is below the substrate of a wetland for most of the growing season and that groundwater recharge is occurring. Wetlands with perennial outlets are discharge areas and cannot be recharge areas, even seasonally.

Storm and Floodwater Storage:

Storm and floodwater storage is the capacity of a wetland to detain or retain stormwater on its surface. This benefits society by preventing storm damage and the loss of life and property. All wetlands, except slope wetlands, have some capacity to contribute to this function. Depressional wetlands have the highest potential for providing this function.

Modification of Water Quality:

Modification of water quality is the removal of suspended and dissolved solids from surface water and dissolved solids from groundwater and conversion into other forms, plant or animal biomass or gases. This function may contribute to societal values related to public water supply, recreation, and aesthetics. The primary mechanisms for the removal of suspended solids are sedimentation and filtration. Dissolved constituents can be removed or made unavailable for downstream plant use via adsorption and absorption by soil particles, uptake by vegetation, loss to the atmosphere by microbiological processes, or combination of the three. Flow characteristics and residence time are the primary wetland characteristics affecting the ability of a wetland to perform this function. Generally, depressional, lacustrine fringe and flat wetlands have the highest potential for performing this function because typically the residence time of water is maximized. Conversely, slope wetlands have the least potential.

Export of Detritus:

Export of detritus refers to the ability of the wetland to produce and export dissolved and particulate organic particles to downstream aquatic ecosystems to serve as an energy source, to support their food chain, or both. Society may value this function as it relates to food web support and ultimately nature research and education, recreation (e.g. hunting and fishing), and the type and density of fauna supported by the wetland. The structure and composition of the wetland's vegetation affects the production of detritus and the degree of the wetland's surface water connection with a stream, river or lake affects the transport of detritus. An increase in the productivity and diversity of an ecological community generally equates to a greater capacity to perform this function. Based on hydrogeomorphic conditions, riverine wetlands have the greatest potential for export of detritus due to an unrestricted outlet. Depressional and flat wetlands have the least potential because of their greater potential to retain suspended sediments.

Contribution to Abundance and Diversity of Wetland Vegetation:

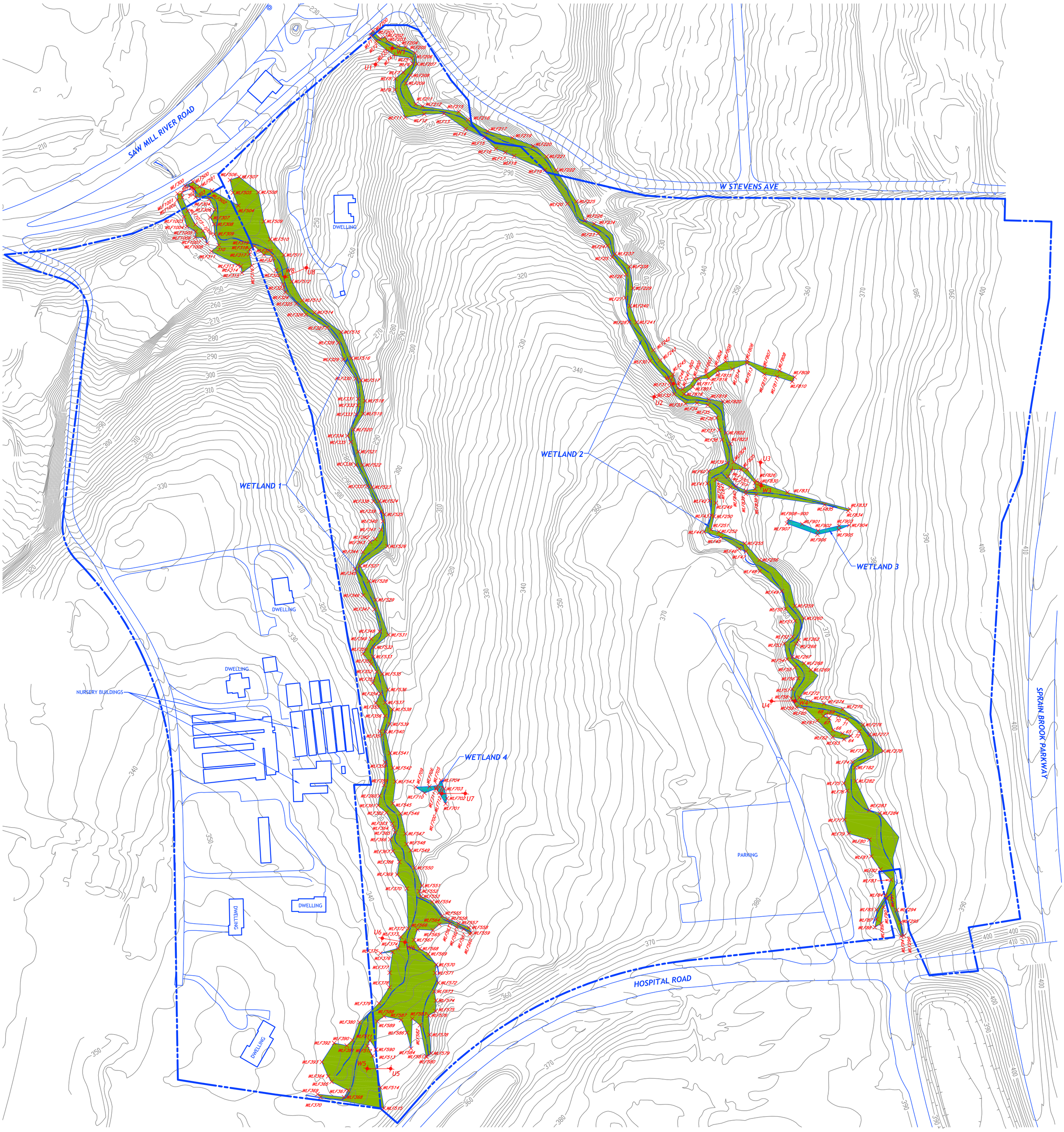
Contribution to abundance and diversity of wetland vegetation is related to the number and type of hydrophytic plants that a wetland can produce and support. Society may value this function as it relates to environmental research and education, recreation, the type and density of fauna supported by the wetland, and production of harvestable goods. Because wetlands support plant species that occur in wetter and dryer (upland) habitats and species that grow only in wetland habitats (poorly drained and very poorly drained soils), most wetlands have a high capacity to contribute to the abundance and diversity of a landscape's vegetation. The primary variables affecting a wetland's capacity to perform this function are its plant species diversity, its vegetation density and dominance, its water regime diversity, and its juxtaposition to other wetlands.

Contribution to Abundance and Diversity of Wetland Fauna:

Contribution to abundance and diversity of wetland vegetation is the capacity of a wetland to support large and/or diverse populations of animal species that spend part or all of their life cycle in wetlands; either an individual wetland or a system or network of wetlands. Society may value this function as it relates to environmental research and education, recreation, aesthetics, and providing a source of food. A wetland's water regime is the primary factor affecting this function, as it largely controls the dominant vegetation type present and influences the animal movement to and within the wetland to food, cover and breeding areas. Other factors affecting the capacity of a wetland to contribute to the abundance and diversity of wetland fauna are the structure and composition of the vegetation community and the juxtaposition of the wetland to other habitat types (e.g., another wetland, upland forest, farm field, surface waterbody, etc.).

The preceding table reveals the onsite wetlands provide basic wetland functions in varying degrees of effectiveness. Presence of non-native plants negatively affects the ability of the onsite

wetlands to provide wildlife habitat. The abundance of slope wetland systems results in a low capacity to function as a source for groundwater recharge due to the hydrodynamics of the wetland areas. Small size of wetland areas limits the ability to contribute to basic wetland functions.



LEGEND

- LOCAL WETLANDS/JURISDICTIONAL FEDERAL WETLANDS
- LOCAL WETLANDS/NON-JURISDICTIONAL FEDERAL WETLANDS
- WATERCOURSE
- WETLAND BOUNDARY
- W1 — U1 TRANSECT AND DATA PLOT
- PROJECT PROPERTY BOUNDARY

NOTES

- EXISTING CONDITIONS INFORMATION (INCLUDING WETLAND AND WATERCOURSE BOUNDARIES) TAKEN FROM A SURVEY PREPARED BY WARD CARPENTER ENGINEERS, INC AND DATED MAY 24, 2017.
- WETLAND BOUNDARIES WERE FIELD LOCATED AND MARKED BY WILLIAM KENNY ASSOCIATES LLC IN MAY 2018.

WILLIAM KENNY ASSOCIATES LLC

SOIL SCIENCE
ECOLOGICAL SERVICES
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LANDSCAPE ARCHITECTURE

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FAX: 203 366 0067
www.wkassociates.net

FEDERAL WETLAND & WATERCOURSE DELINEATION MAP

OWNER:
GATEWAY DEVELOPMENT

LOCATION:
TAX PARCELS: 116.8-1-9, 111.20-1-80, 116.8-1-3, 116.8-1-4, 116.8-1-5, 116.8-1-6, 116.8-1-7, 116.8-1-8
PROPERTY Z169
MOUNT PLEASANT, NEW YORK

DATE: AUGUST 28, 2018
JUNE 18, 2019 (REV. 1)

SCALE: 0' 50' 100'

NORTH

REF. NO. 3836